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REPORT

ON THE



SANITARY ADMINISTRATION

OF THE PUNJAB

FOR THE YEAR 1898.

BY

LIEUT.-COLONEL C. J. BAMBER, I.M.S.,

Offg. Sanitary Commissioner, Punjab.



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READ—

The Report on the Sanitary Administration of the Province for the year 1898, by Lieutenant-Colonel C. J. BAMBER, I. M. S., Officiating Sanitary Commissioner, Punjab.

REMARKS.—*Births*.—There was a decrease of 32,754 in the recorded number of births as compared with the year 1897, and a falling-off of 16 in the birth-rate per 1,000 of population. The rate was also 0·7 less than the mean average birth-rate per *mille* of the last five years. Nevertheless the Punjab sustained its reputation as holding the first place in regard to its birth-rate of all the Provinces in India. The explanation that the scarcity which prevailed in the year prior to the year under review (1897) may account for the decrease in the birth-rate cannot, however, be accepted as correct when it is considered that the birth-rate in the two districts which suffered most from scarcity in 1897 (Gujrât and Hissar) show a higher birth-rate in 1898—

	1897.	1898.
Gujrât ...	35·7	38·1
Hissar ...	33·9	43·2

Again, if Provinces are taken, it is found that the North-Western Provinces and the Central Provinces, which suffered most severely from famine in 1897, show a higher birth-rate in 1898—

	1897.	1898.
North-Western Provinces ...	31·10	37·35
Central Provinces ...	26·66	29·61

2. Some of the fluctuations in the table in paragraph 3 giving the birth-rates in districts are remarkable. For example, Mooltan, which stood 4th in order of rate in 1897 with 48·5 this year, drops to the 16th place with a rate of only 39. Muzaffargarh stood 8th in 1897, with 47·2; it is now 35·1, or 22nd. These two districts adjoin, and it would be undoubtedly satisfactory if some assignable cause for this heavy fall in the birth-rate in this part of the Province could be put forward; nevertheless His Honor sees no reason to question the claim of the Sanitary Commissioner that birth registration in the districts generally is more accurate than it was some years ago. The table appended to paragraph 5 of the Report also exhibits considerable fluctuations in respect to the birth-rates registered in the principal towns, but the Lieutenant-Governor observes that the population of particular towns fluctuates a good deal, and at the same time it is almost certain that the statistics for towns are more accurate than for the rural tracts. If then there is reason to think that on the whole the statistics are improving, he would be inclined to say that what is wrong in the towns is the assumed population, not the registration of deaths. The fact that the calculations have to be made on the figures of the census of 1891 accounts for a great deal in these days, when great changes are going on in consequence of the construction of railways and canals.

With regard to the towns that show a birth-rate considerably below the average it is difficult to understand why birth registration should be more defective in Lahore than, say, in a place like Palwal. There should, His Honor considers, be no excuse for defective registration in such towns as Lahore, Râwalpindi and Peshâwar.

3. *Deaths*.—The death-rate was the same as in the year 1897, *viz.*, 31·05, the actual number of deaths registered having been 638,124, or 103 less than in the previous year. It would have been interesting had the Sanitary Commissioner worked

out the causes which led to Dera Ismail Khan being the most unhealthy district in the Province both in 1897 and 1898. Although the district has a bad reputation for a virulent form of fever, it seems possible that there may be something wrong about the figures. The death-rate for the whole Province for 1897 and 1898 is practically the same, yet the death-rate of the most unhealthy district drops from 50·18 per 1,000 in the former year to 40·11 in the latter, or 10·09 less than it was in 1897. It is remarkable that there were over 5,000 more deaths from fever in Gujranwála in 1898 than in 1897. This district now stands 7th in order of mortality from fever; in the year 1897 it stood 17th. In view of the possibility of the recently opened Chenab Canal having something to do with this, the water level in this tract is being observed with special reference to the question of the effect of irrigation on the public health. In any case, however, the vital statistics of the district should be carefully watched in future, and the Lieutenant-Governor wishes the Sanitary Commissioner to bear this in mind. The deduction drawn in paragraph 12 of the Report between the results of registration in England and Wales and the Punjab are, His Honor observes, about the most encouraging proof of improved registration in the Punjab.

4. *Death-rate among Native Christians and other classes.*—With reference to the remark in the Report that there is no reason why Native Christians should be healthier than other natives, His Honor observes that this a moot point. Whatever may be said to the contrary, the fact remains that the figures *do* show that both in 1897 and 1898 the mortality among Native Christians is comparatively low. This class, too, it would be supposed, realises the importance of observing sanitary laws, it lives more or less under the eye of Europeans, and is less conservative as regards objectionable habits and customs which Sanitary authorities condemn in the less educated native classes. The alleged fact that the high death-rate under other classes (114·55 in 1897; 79·61 in 1898) is due to an error of classification of population requires careful examination, as it must in a great degree vitiate the whole of the figures.

5. *Registration among Europeans and in Cantonments.*—His Honor is glad to observe that the European population is paying more attention to the registration of their births and deaths. He, however, cannot understand why registration should be so defective in cantonments. Those residing within such limits are surely more under control, and more likely to give correct information than those living in ordinary villages and towns. The Lieutenant-Governor thinks there can be no good reason for the defect, and desires that efforts should be made to ascertain the causes and remove them.

6. *Inspections.*—If each alleged inspection shown in the table attached to paragraph 17 of the Report is a separate and distinct one, that is, if the superior inspecting agent's second inspection of work already inspected is not shown as a second inspection, and if these figures can be relied upon for accuracy, they show that the checking of birth registration is very complete in the Punjab, as only 6·3 per cent. of the total recorded births were not checked. The figures appear, however, to be open to doubt. Take the Lahore Division for instance. There were altogether 198,790 births registered in the year (see Annual Form No. 1), and yet vaccinators *alone* are reported to have inspected 254,283 entries of birth. His Honor will be glad to receive any explanation the Sanitary Commissioner may have to offer.

7. *Chief Diseases.*—The year was again on the whole a healthy one as in 1897. There were only 33 deaths from cholera: small-pox was much less prevalent than in 1897, and there was less fever, though the mortality from this cause was as usual severe, 418,206 deaths having been registered from it. Dysentery and diarrhoea prevailed to much the same extent as in 1897. The outbreak of bubonic plague which occurred in October 1897 and continued throughout the year under report, has been described in reports by Major Inglis, I.S. C., and Captain James, I.M.S.,

and the Lieutenant-Governor's remarks on the subject were recorded in the Proceedings of this Government in the Home (Medical and Sanitary) Department, No. 1479 F, dated 17th December 1893. It is sufficient to say here that the disease never extended beyond the Garhshankar Tahsil of Hoshiarpur, and the Nawashahr and a small part of the Phillour Tahsil of Jullundur; that its increase began in February, became serious in March and April, and reached culminating point in the first ten days of May, after which there was a steady fall till a reduction in the staff on plague duty became feasible in the middle of July; thereafter, that the disease was kept alive by a chain of sporadic cases, mostly of a mild type, till towards the end of the year, when it began again to assume a menacing form and made it evident that it had obtained a hold on the municipal town of Ráhon. Its history during the current year has been similar, though the area of infection has been much more circumscribed and the period of virulence markedly shorter.

8. *Injuries*.—Under this head it is only necessary to note with reference to the allusion to the proposed Pasteur Institute for India in paragraph 35 that it is understood that this matter is still engaging the attention of the Government of India.

9. *Sanitary Works*.—In discussing the Sanitary Commissioner's Report for 1896 the Army Sanitary Commission drew attention to the indefiniteness of the conclusions given by the endeavour to show from vital statistics the influence on general health exercised by drainage schemes and the provision of water supplies. Improved registration of deaths may obscure the real facts: and the unwillingness of the people, as a whole, to use pipe water particularly on its first introduction tends to discount the value of a pure supply. When, however, as is the case with some of the figures accompanying paragraph 43 of the Report now under review, there is *prima facie* evidence of a deterioration in health in certain respects in particular localities where sanitary improvements have been effected, the matter is one which deserves investigation. In the words of the Sanitary Commissioner with the Government of India in paragraph 206 of his Report for 1896: "There may be no real improvement in the quality of the water consumed, or some condition detrimental to the public health may have accompanied introduction of an improved supply of water. In most of the towns it may be concluded from the amount of water per head that is taken from the works that a mixed supply is being used, and this is an unmixed evil, for the old sources of water are much less likely to be conserved than they were before the introduction of new supplies. It may be that sufficient care is not bestowed upon the works Water-supply works require expert management, and to entrust their control to a man who knows nothing of hydraulics and less about the delicate working of a filter bed is to court disaster, however skilfully and economically the pumping engines may be managed. Again, drainage may be at fault, where a greatly increased quantity of water is brought into a town before adequate means to remove it have been provided." It is at all events desirable to investigate and either confirm or dispel any suspicion which figures may suggest that large measures of drainage and water-supply have not achieved all that was expected of them.

10. In the case of Peshawar City it is not possible to draw any conclusions from the figures in paragraph 43 of the Report under review. The drainage works were completed in 1888 and the water-works four years later, and it is not clear for what quinquennial periods the average annual death rates prior and subsequent to the improvements have been calculated. The figures which were incorporated in paragraph 14 of the Review of the Report for 1897, however, showed that the death-rate from fever for the quinquennial period prior to the completion of the drainage was 19·26; for the period between the completion of the drainage and the completion of the water-supply it rose to 22·57; while for the next period up to and including the year 1897 it fell to 22·37. In 1898 it fell further to 20·72. In the Province generally the rate was 20·35 against 20·57 in 1897: in the Peshawar District alone it was 19·69 against 18·16 in the preceding year.

The rate for dysentery and diarrhoea in Pesháwar City fell from 1·5 (for the quinquennial period before 1888) to 1·65 after the completion of the drainage, and to 1·31 for the period after the completion of the water-supply and prior to the year under review. In 1898 the rate was only 1·28, so that the decrease has been well maintained. In the district of Pesháwar generally there appears to have been no corresponding fall. The rate for the quinquennial period prior to 1897 was 0·22, for 1897 it was 0·23, and for 1898 the same.

So far as figures show there was no improvement under the head of cholera in Pesháwar City after the introduction of the drainage system; but this would hardly have been expected. After the completion of the water-supply, however, the rate fell from 1·40 to 0·76 (for the period ending with 1897), and there were no cases at all in 1898. These results are on the whole encouraging.

11. The good results of drainage are particularly noticeable in the reduction of the mortality from fevers in Ludhiána, Amritsar, Gujránwála and Kohát, and in the case of six so-called rural circles named in the tabular statement in paragraph 43 they are almost phenomenal. All these places show an improvement also under the head of cholera, and most of them under the head of dysentery and diarrhoea too. In the case of Kohát the combined effect of drainage and water-supply have, on the face of the figures, been seen in a reduction of the cholera mortality from 6·5 to *nil*: but the fact is that there has been no serious epidemic of cholera in the Province since the year before the Kohát water-supply was completed.

12. Cases in which drainage has *primâ facie* failed are Siálkot (where the fever mortality has risen from 9·3 to 16·9, though the figure for dysentery and diarrhoea has fallen from 3·5 to 2·8), Jullundur (where the fever rate has risen from 15·9 to 18·0), and Banga (where fever has remained practically stationary, though dysentery and diarrhoea have risen from 2·7 to 3·8). The Lieutenant-Governor will be glad if the Sanitary Board will investigate and report on the circumstances of these three places.

13. In considering the effects of a pure water-supply the Lieutenant-Governor thinks it necessary to leave out of account the figures for fevers in hill stations. Hill stations have a large transient population, and the amount of malaria is affected at least as much by the conditions under which that population lives during the cold weather as by the conditions of their summer residence. The improvement at Simla and Dunera and the deterioration at Dalhousie and Murree, under this head, furnish no reliable evidence of the results of a pure water-supply: and the case of Kálka is probably similar. On the other hand, the absence of improvement under the head of dysentery and diarrhoea at Dalhousie, and the marked increase under these heads in Murree, will call for enquiry if the phenomena continue.

14. The improvement effected by the water-supply in Delhi, Umballa, Lahore and Haripur has been very marked. In Ráwalpindi, however (where the water-supply was completed as long ago as 1887), the death-rate from fevers has risen from 16·4 to 22·5, though dysentery and diarrhoea have diminished. Abbottabad also shows a slight deterioration and an improvement under these two heads respectively. The case of Ráwalpindi, like those of Siálkot, Jullundur and Banga, merits the attention of the Sanitary Board, and the Lieutenant-Governor will be glad to have the views of that body on the subject.

15. *Quinine sales.*—In paragraph 15 of His Honor's Review on the Sanitary Report for the year 1897 it was reported that the scheme of selling quinine to the people by Postal agency had failed consequent, among other causes, on its having had to compete with the free distribution of the drug at the dispensaries: it was, however, added that His Honor was unwilling to see this effort to bring quinine within reach of people at remote places abandoned, and that a scheme that would relieve the Postal agency of undue competition was under consideration. This scheme, which comprises the sale of the drug at all Branch Post Offices and Sub-Post Offices at places where there are no public

Paragraph 5a.

dispensaries, the free issue of the drug being suspended except at the dispensaries, it only being given there free to those who cannot afford to pay for it, was introduced into the Delhi and Lahore Divisions in the month of March last. The result of this further experimental measure to make the drug readily accessible to the people will not be known until the end of the current year.

16. *Rewards*.—The replies of District Officers on the subject of rewards to village communities for zeal in sanitation indicate some misapprehension of the suggestion put forward in Punjab Government Circular, Medical and Sanitary, No. 1480, dated 15th December 1897. It was there remarked that the rewards so far granted from District Funds had taken the shape of the grant of khillats and sanads to selected village headmen and others somewhat on the principle on which rewards are given to individuals who have constructed work of public utility at their own expense ; but that the original proposal of the Sanitary Board had been not for the reward of individuals but of entire villa communities. It was therefore requested that one District Board in each Division should try the experiment of offering to pay a considerable fraction of the revenue demand of the one village in each tahsil of the district which showed the best results in sanitary improvement in the year 1898. From several districts reports have been received which show that the distinction between rewards to headmen and other prominent individuals and rewards to whole village communities has not been appreciated. Sir Mackworth Young does not doubt that there are many instances in which rewards to prominent individuals are more likely to stimulate activity than any concession to the community as a whole, but he thinks the other experiment should also have a trial in each Division during the current or the coming year, and he commends these remarks to the consideration of Commissioners and Deputy Commissioners. The Sanitary Commissioner should ascertain and report the action taken.

Rewards of Rs. 125 each were given by the District Board of Hoshiarpur to four village communities in that district for attention to sanitation during the year. In no other district were rewards actually given, though in some cases budget provision was made for expenditure under this head, but not utilised owing to the lack of interest displayed in the matter by the rural population. Sir Mackworth Young thinks it would be a good thing if, when offering the reward, the District Board were to lay down in consultation with the Civil Surgeon the points upon which stress would be laid in awarding the prize. The Sanitary Board will be asked to formulate general instructions on this subject, but Civil Surgeons should be at liberty to suggest modifications of detail in order to suit local circumstances.

17. *Sanitary Board*.—The remarks of the Government of India on the work of the Sanitary Board which were recorded in Mr. Fraser's letter No. 4302, dated the 5th of November 1898, are under Sir Mackworth Young's consideration. At present he awaits the suggestions of the Board. The Board has never discharged other than consultative functions in the Punjab, but the question of extending the scope of its work will now receive attention. The Lieutenant-Governor regrets that the Board did not meet during 1898 and is enquiring why.

18. In conclusion, the Lieutenant-Governor desires to convey his acknowledgments to Lieutenant-Colonel Bamber for his Report and his thanks to the Department for the good work done by it during the year.

ORDER.—Ordered, that a copy of the foregoing Remarks be circulated with the Report and furnished with the usual number of copies of the Report to the Government of India ; also that the Review be published in the *Punjab Government Gazette*.

Ordered also, that a copy be forwarded to the Sanitary Commissioner, Punjab, for information and guidance in regard to the points indicated.

By order of the Hon'ble the Lieutenant-Governor,

H. J. MAYNARD,

Judicial and Genl. Secy. to Govt., Punjab.

Section I.—Meteorology.

No Remarks.

Section II.—European Army.

No Remarks.

Section III.—Native Army.

No Remarks.

Section IV.—Jails.

No Remarks.

ERRATA.

In para. 51, page 23, line 4 below the table, after the word "was" *add* "Jhang "

In Annual Form No. IV, column 8, under "20 years and 30 years" total of the Province, for "317 males" *read* "17,317"

In Annual Form No. XI, population of Fázilka, for "7,568" *read* "7,563"

Appendix A in Delhi District in the Jataula village, column "60 and upwards," *read* 1 female.

In the same district, in column total of female births for "1,438" *read* "1,425," and for total births in the same column, instead of "2,959" *read* "2,949."

In the same Appendix, District Karnal, village Isrána, for "83," No. of female births, *read* "33."

TABLE OF CONTENTS.

Para.	Review of the Report of Government.										Page.
SECTION V.—GENERAL POPULATION.											
BIRTHS.											
1	Births registered during 1898 compared with 1897										1
2	Punjab birth-rate higher than that of other Provinces of India										ib.
3	District with high birth-rates arranged in order of sequence										ib.
4	Registration of births more accurate than previous years										ib.
5	Births registered in towns										2
DEATHS.											
6	Number of deaths										3
7	Punjab death-rate compared with that of other Provinces										ib.
8	Death by sex										4
9	The high and low death-rates of some of the towns										ib.
10	Death-rates in principal towns										ib.
11	Mortality in different age periods										6
12	Infant mortality in towns and rural circles										ib.
13	Deaths according to classes										7
14	Registration among Native Christians										ib.
15	Registration among Europeans and Eurasians										ib.
16	Vital statistics of the cantonments										ib.
17	Result of inspections by Divisional Inspectors, Vaccinators, Tahsildars and Naib-Tahsildars										8
18	Working of the Municipal bye-laws										ib.
SECTION VI.—CHIEF DISEASES.											
19	Deaths from different diseases, 1867-98										10
20	Charts showing deaths from different causes										11
PLAGUE.											
21	Plague										11
CHOLERA.											
22	Cholera										11
SMALL-POX.											
23	Deaths from small-pox										11
24	Districts with high and low mortality										12
25	High death-rates from small-pox in municipal towns										ib.
FEVERS.											
26	Fever chart										12
27	Districts with high and low fever death-rates										ib.
DYSENTERY AND DIARRHŒA.											
28	Chart showing deaths from dysentery and diarrhœa										13
29	Districts with high death-rate from dysentery and diarrhœa										ib.
INJURIES.											
30	Deaths from injuries										13
31	Deaths from suicide										ib.
32	From wounding, &c.										ib.
33	Deaths from accidents										ib.
34	Ditto snake-bite										ib.
35	Ditto hydrophobia										14
36	Ditto "all other causes"										ib.
SECTION IX.—SANITARY WORKS.											
37	Water-supply and drainage schemes										15
38	Income and expenditure of municipal towns										17
39	Comparative statement of expenditure										ib.
40	Expenditure on drainage, sewage and water-supply										ib.
41	Income from manure and town sewerage										ib.
42	Works of public utility										18
43	Statement showing statistics of mortality in localities where water-works, drainage, or both, have been carried out										19
SECTION X.—GENERAL REMARKS AND PERSONAL PROCEEDINGS.											
44	Administration										20
45	Lectures on hygiene										ib.
46	Inspection work of Sanitary Commissioner										ib.
47	Ditto Civil Surgeons and Assistant Surgeons										ib.

<i>Para.</i>		<i>Page.</i>
48	Sickness in the Lawrence Military Asylum, Sanáwar	23
49	Sickness and mortality in the Lawrence Memorial Asylum, Murree	<i>ib.</i>
50	Vital statistics of selected areas of the Western Jumna Canal	<i>ib.</i>
51	Clearing and repairing of wells	<i>ib.</i>
52	Gratuitous distribution of quinine... ..	24
53	Sewage farm	<i>ib.</i>
54	Khillats and rewards to villagers for sanitation... ..	<i>ib.</i>
55	Village sanitary note-book	
	SANITARY BOARD.	
56	Sanitary Board Meeting	25
57	Reason why no meetings were held	<i>ib.</i>
58	Conclusion	<i>ib.</i>

ANNUAL FORMS.

I.—Showing the births registered in the districts of the Punjab during the year 1898	i
II.—Statement of births and deaths registered in each district of the Punjab and the receipts and expenditure, in each district, from, and on conservancy during the year 1898	ii—iii
III.—Deaths registered in the districts of the Punjab during each month of the year 1898	iv
IV.—Deaths registered according to age in the districts of the Punjab during the year 1898	v—vii
V.—Deaths registered according to classes in the districts of the Punjab during the year 1898	viii
VI.—Deaths registered from different causes in rural circles, and towns of the Punjab during the year 1898	ix—xvii
Appendix to VI.—Deaths registered in the cantonments of the Punjab during the year 1898	xviii
VII.—Deaths registered from cholera in the districts of the Punjab during each month of the year 1898	xix
VIII.—Deaths registered from small-pox in the districts of the Punjab during each month of the year 1898	xx—xxi
IX.—Deaths registered from fevers in the districts of the Punjab during each month of the year 1898	xxii—xxiii
X.—Deaths registered from dysentery and diarrhoea in the districts of the Punjab during each month of the year 1898	xxiv—xxv
XI.—Statement showing the chief sanitary defects in the municipalities of the Punjab during the year 1898	xxvi—xli

APPENDICES.

Appendix A.—Statement showing births and deaths registered in the selected villages situated on the Western Jumna Canal during the year 1898	xlili—xlix
" B.—Statement showing the income and expenditure of municipalities in each district of the Punjab during the year 1898	i—li
" C.—Statement showing the rainfall in inches at the sadr stations of the Punjab during the year 1898	lii
" D.—Lawrence Military Asylum at Sanáwar	liii—liv
" E.—Lawrence Memorial Asylum at Murree	lv—lvi
" F.—Statement showing the rates of principal articles of diet, rainfall and death-rates by quarters during the year 1898	lvii
" G.—Statement showing the number of wells cleaned and the number of parapets constructed during the year 1898	lviii

Section V.—General Population.

BIRTHS.

1. There were 841,869 births registered in the Province in 1898, giving a birth-rate of 41·0 per *mille* of population. In the year preceding the number was 874,623 or 42·6 per *mille*. The mean average birth-rate for the past five years was 41·7 per *mille*. The male births in 1898 were 441,732 and the female 400,137. There has been a decrease in the recorded number of births as compared with 1897 of 32,754. During a year of comparative plenty and in the absence of any unusual epidemic, the number of births might be expected to show an increase instead of a falling off. But the birth-rate of any one year is affected by the influences prevailing during the preceding year. Thus the scarcity of 1897 might account for this decrease.

2. Compared with the other Provinces of India the Punjab again takes first place as regards its birth-rate, as will be seen from the figures noted in the following table:—

<i>Birth-rate per mille.</i>					<i>Birth-rate per mille.</i>				
Punjab	...	...	...	41·0	Central Provinces	...	...	...	29·61
Bengal	...	...	...	35·79	Madras	...	...	...	27·4
North-Western Provinces and Oudh	...	...	...	37·35	Bombay	...	...	...	30·94
Assam	...	...	...	29·46					

3 The districts which show a birth-rate of over 40 per *mille*, between 30 and 40 per *mille*, and below 30 per *mille* are given in the following table:—

<i>Birth-rates over 40 per mille</i>		<i>Birth-rates between 30 and 40.</i>		<i>Birth-rates below 30 per mille.</i>	
1. Gujranwála	... 53·8	1. Hoshiárpur	... 39·1	1. Simla	... 21·8
2. Jhang	... 53·4	2. Mooltan	... 39·0	2. Pesháwar	... 29·8
3. Gurgáon	... 53·0	3. Shahpur	... 39·0		
4. Rohtak	... 45·8	4. Gujrá	... 38·1		
5. Ferozepore	... 45·7	5. Montgomery	... 37·8		
6. Amritsar	... 45·1	6. Umballa	... 36·7		
7. Karnál	... 42·8	7. Bannu	... 35·5		
8. Siálkot	... 44·9	8. Muzaffargarh	... 35·1		
9. Lahore	... 44·3	9. Kángra	... 35·0		
10. Gurdáspur	... 43·5	10. Hazára	... 35·0		
11. Hissár	... 43·2	11. Kohát	... 34·9		
12. Delhi	... 44·9	12. Ráwalpindi	... 34·1		
13. Ludbiána	... 42·6	13. Jhelum	... 33·6		
14. Jullundur	... 42·1	14. D. I. Khan	... 30·6		
		15. D. G. Khan	... 30·6		

Fourteen districts give a birth-rate varying between 53·8 and 42·1, 15 districts had a birth-rate between 30 and 40, while the districts of Simla and Pesháwar showed birth-rates of 21·8 and 29·8, respectively. The low birth-rate of Simla is, as has been noticed in previous reports, due to the preponderance of the male over the female population, and with regard to Pesháwar it may be said that the population being chiefly Muhammadans of the Afghán type, they are most averse to register their births and deaths, female births more particularly.

4. The above table when compared with the statistics of the previous decade, however, affords the satisfactory information that birth registration in the districts is certainly more accurate (it is in some districts even above the normal standard) than it was ten years ago.

With continued zeal and perseverance we have obtained in this Province, at any rate, a fairly accurate system of birth registration on which reliable statistics can be worked, and it is interesting to note that in all the districts of this Province, the births are more numerous than the deaths, except in Dera Ismail Khan, where the deaths exceed the births: in six districts the births exceed the deaths by over 15 per *mille*, in thirteen districts by between 10 and 15, and in the rest by less than 10 per *mille*.

5. The following table shows the birth-rates registered in the principal towns and hill sanatoria of the Punjab from 1888 to 1897, together with the average for these ten years, and the birth-rate for 1898:—

No.	DISTRICTS	Towns.	Population according to the Census of 1891	BIRTH-RATE FOR PREVIOUS 10 YEARS FROM 1888 TO 1897.										Average birth-rate for 10 years.	Birth-rate for 1898.
				1888	1889	1890	1891	1892	1893	1894	1895	1896	1897		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	HISSAR	Hissar	16,851	33	27	32	28	32	45	47	40	43	35	37	33
2		Hānsi	15,190	39	41	46	36	38	32	43	43	42	37	40	43
3		Bhiwāni	35,487	39	38	36	33	35	37	37	35	34	28	35	32
4		Susa	16,413	36	42	43	34	41	33	43	40	43	40	40	34
5	ROHTAK	Rohtak	16,191	38	37	35	43	44	45	46	48	41	39	42	48
6		Jhajjar	11,881	37	48	43	45	42	46	47	46	43	42	44	39
7	GURGAON	Rowāli	27,984	34	37	38	33	37	41	41	42	36	28	37	29
8		Pulwāli	11,227	32	42	49	41	46	51	51	56	53	47	47	47
9	DELHI	Delhi	189,648	37	39	37	36	33	38	41	39	41	41	38	38
10		Sonepāt	12,611	29	41	43	46	40	53	54	41	47	44	44	44
11	KARNAL	Karnāl	21,330	30	33	35	35	38	45	49	43	46	50	40	43
12		Kāthāl	15,768	39	42	34	45	51	57	57	53	51	48	48	48
13		Pāmpāt	27,547	33	37	33	31	47	53	51	51	51	47	43	43
14		Shahābad	11,473	24	27	22	38	36	43	35	32	34	40	33	30
15	UMBALLA	Umballa	26,556	40	40	36	39	42	42	43	43	39	41	41	36
16		Jagīdhī	13,029	34	32	32	32	36	38	39	32	28	30	33	28
17		Sīdhāwā	10,445	27	33	31	32	25	31	34	27	52	32	30	26
18	HOSHIARPUR	Hoshiarpur	17,546	38	40	40	38	41	44	38	38	34	37	39	34
19		Tānda and Uimar	11,632	41	52	47	41	40	32	39	39	33	34	39	36
20	JULLUNDUR	Jullundur	50,375	56	57	60	46	46	46	48	43	45	45	49	41
21		Rāhōn	10,667	29	31	35	39	36	39	48	36	38	37	37	31
22		Kartārpur	10,441	34	38	37	41	38	37	41	30	35	34	36	34
23	LUDHIANA	Ludhiana	46,024	38	40	44	36	40	34	44	43	42	37	40	31
24		Jagrōn	18,116	46	47	47	43	46	46	49	47	44	47	46	43
25	FEROZPORE	Ferozepore	25,337	41	35	37	33	33	25	36	37	37	38	35	26
26	MOOLTAN	Mooltan	64,263	48	48	46	43	42	38	48	48	48	49	46	42
27	JHANG	Maghiana	13,866	48	48	49	41	38	41	54	51	53	51	47	45
28		Chinot	13,476	50	52	51	40	10	38	51	57	49	56	48	54
29	LAHORE	Lahore	159,597	23	31	28	27	34	31	34	35	36	35	32	32
30		Kasūr	20,290	42	42	38	39	44	36	39	40	45	42	41	40
31		Chūmān	10,339	34	44	44	44	41	58	56	58	60	50	54	54
32	AMRITSAR	Amritsar	135,401	35	40	39	39	43	38	45	40	45	43	41	41
33	GURDASPUR	Batāla	27,223	45	53	48	43	43	40	51	38	48	42	45	42
34	SIALKOT	Sialkot	33,965	43	43	43	42	49	49	54	56	56	56	49	53
35	GUJRAT	Gujrāt	17,671	39	43	32	26	50	38	47	43	46	50	41	45
36		Jalāpur	11,065	39	43	40	34	49	38	48	49	45	44	43	40
37	GUJRANWALA	Gujranwāla	25,892	42	42	45	30	44	35	44	45	45	41	41	37
38		Wazīrabad	15,786	32	37	40	37	46	32	40	41	45	52	40	39
39	SHAHPUR	Bhera	17,428	53	55	49	42	41	36	45	43	42	46	45	37
40	JHELUM	Pind Dādan Khan	15,055	28	27	26	36	38	32	38	37	36	35	33	27
41	RAWALPINDI	Rāwalpindi	38,334	41	32	34	29	31	21	35	34	34	31	33	26
42	PESHAWAR	Peshāwar	63,079	31	28	35	32	31	30	33	36	39	33	33	29
43	KOHAT	Kohāt	14,347	27	34	34	26	34	24	30	30	36	36	31	26
44	D. I. KHAN	Dera Ismail Khan	21,573	26	27	28	36	41	41	47	48	51	67	41	33
45	D. G. KHAN	Dera Ghāzi Khan	23,899	36	29	32	29	36	28	35	37	36	37	34	21
MEAN			1,412,775	37	39	39	36	39	37	42	41	42	41	39	37
Hill Sanatoria.															
	Simla	...	13,279	11	12	13	13	15	18	18	20	17	20	16	22
	Dharmasāla	...	2,778	28	28	25	27	32	33	37	43	41	41	34	42
	Dalhousie	...	807	5	9	10	2	26	26	27	25	29	22	18	21
	Murree	...	1,459	11	7	8	11	21	16	17	21	29	31	17	28

It will be seen from the above statement that the towns that have registered the highest average birth-rates are Chunián (50) per *mille*, Jullundur (49), Siálkot (49), Kaithal (48), Chiníot (48), Palwal (47), Maghiána (47), Jagráon (46), Mooltan (46), Batála (45), Bhera (45), Jhajjar (44), Sonepat (44).

The towns that show a birth-rate considerably below the average are Sádhaúra (30), Kohát (31), Lahore (32), Shakabad (33), Jagádhri (33), Pind Dádan Khan (33), Ráwalpindi (33), Pesháwar (33), Dera Gházi Khan (34). The low birth-rate in these towns is undoubtedly due, to a very great extent, to defective registration. But there is another cause that partly accounts for the low rates. In some of our towns there is a large preponderance of the male over the female population. Correcting the male population in the towns according to the proportion which it bears to the female population in the Province generally, the difference in the recorded birth-rate and the birth-rate calculated on the corrected population is most marked in the towns of Ráwalpindi and Lahore, in which the corrected ratios are 34 and 36 as compared with the recorded rates for 1898 of 26 and 32. In the hill sanitaría, in which the male population considerably exceeds the female, the ratios on the corrected population were Simla 39, Dharmasala 58, Dalhousie 30 and Murree 38, as compared with the recorded rates of 22, 42, 21 and 28, respectively. There is another point which must be borne in mind. The population on which our ratios are calculated is according to the census of 1891, or nearly eight years old. As a new census will take place in a couple of years (1901), I have not thought it necessary to give a statement showing the birth and death-rates for each town and rural circle separately calculated on the estimated population, as is done in England, or to make any criticism on the accuracy of the figures in which the birth-rate has been calculated for the present and the preceding years, but I may remark that during the last decennium, and that is the only decennium from which an increase in the population of the towns can be estimated, there was an increase of nearly 9 per cent., so that an increase of 7 per cent. over the recorded ratios would probably represent the true figures.

With the view to find out the proportion of children born dead according to sexes, I had a statement prepared showing this information. As the still-births are not included in our returns in accordance with the orders of the Government of India, sufficient care has not been taken by the Registration Moharrirs in any of the districts to accurately record the information. The attention of Civil Surgeons has been drawn to this matter, as an unusually small rate of male as compared with the female still-births would furnish a clue to infanticide, in those places where this practice still prevails.

DEATHS.

6. There were 638,124 deaths registered in the Province during the year 1898. In 1897 638,227 deaths or only 103 more than in 1898 were recorded, the death-rates for the two years being exactly the same, *viz.*, 31·05. Of the total deaths registered 330,018 were males and 308,106 females against 326,924 and 311,303, respectively, in the previous year.

7. The ratios of mortality recorded in other Provinces of India during the year 1898 appear in the following table along with the ratio of this Province :—

Bombay	29·16	Bengal	26·57
Madras	21·0	North-Western Provinces and Oudh	27·38
Central Provinces ...	23·30	Punjab	31·05
Assam	36·15		

8. In 1898 the death-rates of males per 1,000 males living was 29·9 and of females per 1,000 females living 32·4; against 29·6 and 32·7 in 1897. For every 100 females who died 107·1 deaths among males were registered. These proportions, however, vary considerably, the excess of male deaths over females being most marked in Simla, 143·6, in Pesháwar, 128·8 and in Dera Gházi Khan 124·5. As a comparison it may be stated that the rates in England and Wales during the 10 years, ending 1885 to 1894, were 112 deaths of males to every 100 deaths of females.

The high and low death-rates of some of the towns.

9. In the following table are shown those districts which had death-rates of 30 and over per *mille* and those having rates of under 30:—

Districts with death-rates of 30 and over.

Dera Ismail Khan	...	...	40·11
Jhang	...	...	39·39
Karnál	...	...	37·92
Gujránwála	...	...	36·85
Gurgáon	...	...	36·53
Amritsar	...	...	33·91
Delhi	...	...	33·26
Siálkot	...	...	33·17
Bannu	...	...	32·95
Gurdáspur	...	...	32·73
Ludhiána	...	...	32·31
Lahore	...	...	32·17
Kohát	...	...	31·21
Ráwalpindi	...	...	30·86
Muzaffargarh	...	...	30·72
Umball?	...	...	30·62
Jullundu	...	...	30·61
Kángra	...	...	30·04

Districts with death-rates below 30.

Ferozepore	...	...	29·97
Jhelum	...	...	29·93
Rohtak	...	...	29·17
Mooltan	...	...	28·56
Hoshiárpur	...	...	28·05
Dera Gházi Khan	...	...	27·91
Hissár	...	...	27·71
Gujrát	...	...	27·67
Shahpur	...	...	26·92
Pesháwar	...	...	23·37
Simla	...	...	21·56
Hazára	...	...	21·43
Montgomery	...	...	21·27

It will be seen from the above statement that the most unhealthy districts in 1898 were Dera Ismail Khan (40·11), Jhang (39·39), Karnál (37·92), Gujránwála (36·85) and Gurgáon (36·53).

10. The subjoined table shows the death-rate recorded in the principal towns and hill sanatoria from 1888 to 1897; the average for these ten years and the death-rates for 1898—

Death-rates in principal towns.

No.	DISTRICTS.	Towns.	Population according to the census of 1891.	DEATH-RATE FOR 10 YEARS.										Average death-rate for 10 years.	Death-rate for 1898.
				1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	HISSAR	Hissar	16,854	30	29	33	25	65	41	43	38	42	67	41	37
2		Hansi	15,190	30	28	54	23	65	30	30	29	26	38	36	28
3		Bhiwani	35,487	32	41	54	42	55	35	25	26	46	57	43	32
4		Sirsa	16,415	39	37	40	30	85	26	27	29	31	64	41	35
5	ROHTAK	Rohtak	16,191	28	27	35	40	40	32	35	31	38	31	34	26
6		Jhajjar	11,851	25	25	28	36	36	32	27	28	37	31	31	25
7	GURGAON	Rewari	27,931	27	34	30	29	43	27	37	31	34	30	22	22
8		Palwal	11,227	53	47	46	40	49	35	45	37	41	50	44	45
9	DELHI	Delhi	189,648	38	38	39	45	49	31	41	43	40	34	40	34
10		Sonepat	12,611	42	35	65	49	56	33	18	42	41	25	44	29
11	KARNAL	Karnal	21,539	33	36	55	47	52	36	50	42	44	37	43	42
12		Kaithal	15,768	25	27	40	27	56	48	53	40	49	44	41	41
13		Panipat	27,547	29	25	54	37	36	31	51	40	38	37	38	37
14		Shahjahanpur	11,473	19	18	56	33	12	26	40	39	25	33	32	23
15	UMBALLA	Umballa	26,856	35	33	72	30	45	30	40	41	31	28	39	27
16		Jagadhri	13,029	39	32	40	30	38	34	57	50	38	38	39	28
17		Sadhana	10,445	25	27	54	50	48	26	32	28	24	21	34	24
18	HOSHIARPUR	Hoshiarpur	17,546	32	37	46	37	56	47	51	37	32	36	41	35
19		Tanda and Umrar	11,632	37	36	46	28	90	51	59	34	30	25	44	34
20	JULLANDER	Jullundur	50,375	33	40	41	26	43	29	52	30	29	30	36	32
21		Rahon	10,067	37	31	39	36	56	32	45	32	29	33	37	30
22		Kartarpur	10,441	...	...	...	27	36	31	103	39	27	21	41	28
23	LUDHIANA	Ludhiana	46,024	32	29	39	33	61	37	40	31	34	46	38	34
24		Jagraon	18,116	49	46	17	46	44	30	33	31	39	33	40	29
25	FEROZEPUR	Ferozepore	25,337	40	37	45	27	58	30	32	28	31	38	37	28
26	MOOLTAN	Mooltan	64,265	31	40	37	28	55	30	30	39	29	33	35	29
27	JHANG	Maghiana	13,866	36	34	38	36	67	33	30	33	33	36	38	42
28		Chinfot	13,476	32	36	39	26	42	29	33	30	37	33	34	42
29	LAHORE	Lahore	158,597	29	37	43	31	54	37	33	30	31	29	35	34
30		Kasur	20,290	43	48	49	28	55	58	56	36	42	26	44	31
31		Chunian	10,339	...	...	...	24	66	34	30	30	47	45	39	46
32	AMRITSAR	Amritsar	135,401	47	41	60	42	66	46	60	41	43	36	48	40
33	GURDASPUR	Batála	27,223	37	35	48	26	61	33	83	28	29	27	41	30
34	SIALKOT	Sialkot	33,965	27	30	56	37	46	34	45	35	39	33	38	44
35	GUJRAT	Gujrat	17,671	30	25	129	28	51	20	37	26	32	30	42	37
36		Jalalpur	11,065	31	33	75	35	55	35	47	26	32	25	39	42
37	GUJRAN-WALA	Gujranwala	25,892	29	32	60	25	40	29	29	29	27	26	33	25
38		Wazirabad	15,786	28	36	84	37	52	34	41	31	29	40	41	49
39	SHAHPUR	Bhera	17,428	40	38	40	30	73	39	25	21	36	34	38	30
40	JHELMUM	Pind Dadan Khan	15,053	39	41	35	34	66	38	37	32	31	45	40	35
41	RAWALPINDI	Rawalpindi	38,334	47	50	47	31	48	32	33	40	45	44	42	38
42	PESHAWAR	Peshawar	63,079	36	40	34	46	56	33	33	35	35	27	38	30
43	KOHAT	Kohat	14,347	45	29	33	35	63	28	29	29	33	39	36	29
44	D. I. KHAN	Dera Ismail Khan	21,573	25	24	30	34	78	38	51	39	36	75	43	54
45	D. G. KHAN	Dera Ghazi Khan	23,899	28	24	26	27	48	26	32	33	25	46	32	30
		MEAN	1,412,775	36	37	48	36	54	35	42	35	36	36	40	34

No.	DISTRICTS	TOWNS.	Population according to the census of 1891	DEATH-RATE FOR 10 YEARS.											Average birth-rate for 10 years.	Birth-rate for 1898.
				1888	1889	1890	1891	1892	1893	1894	1895	1896	1897			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Hill Sanitation															
	Simla		13,279	26	25	13	26	23	32	26	32	23	23	29	27	
	Dharmasala		2,778	21	20	40	31	30	22	33	37	51	44	33	37	
	Dalhousie		807	21	16	29	22	21	29	30	22	27	24	24	52	
	Munree		1,459	51	16	21	31	24	32	30	29	42	29	32	33	

The death-rate of the 45 principal towns taken together was 34 in 1898 against 36 in the two preceding years and an average of 40 for the decennium ending 1897.

Amritsar has an average of 48 per 1,000, or the highest death-rate of all the towns; Palwal, Sonapat, Tanda and Urmur and Kasur come next with a death-rate of 44 per 1,000.

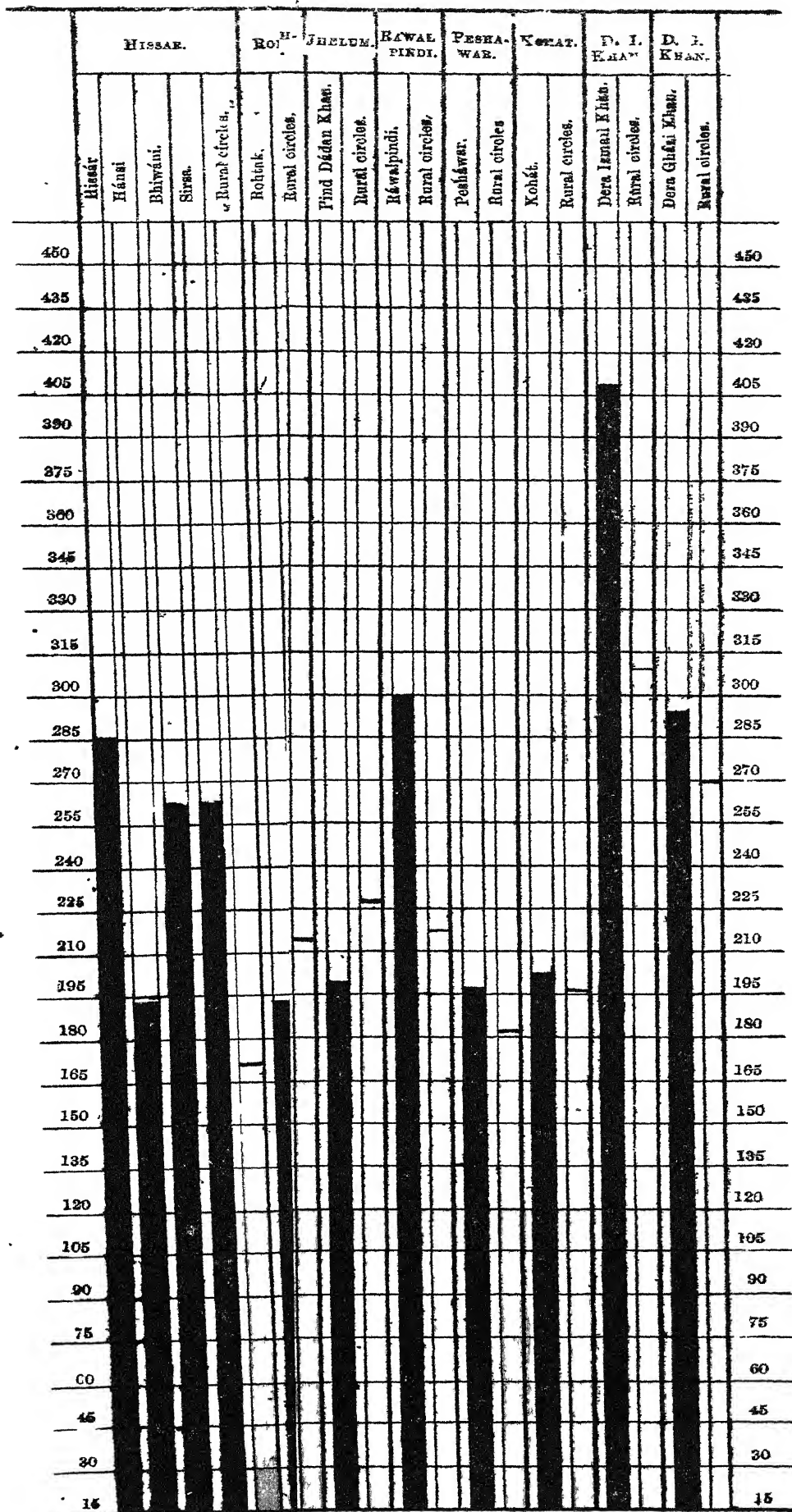
In 15 others, *viz.*, Hissar, Bhiwani, Sirsa, Delhi, Karnal, Kaithal, Hoshiarpur, Kartarpur, Jagraon, Batala, Gujrat, Wazirabad, Pind Dadan Khan, Rawalpindi and Dera Ismail Khan the rates vary between 40 and 43 per 1,000. Annual Form No. XI shows the chief sanitary defects in these towns and the remedial measures adopted. It may be noted here that in Amritsar, the most unhealthy town, the water-supply scheme is still under consideration, but in a very short time this town will be supplied with pure water which will, it is to be hoped, tend to lessen the high mortality.

Mortality in different age periods

11. The following table shows the death-rates according to different age periods per 1,000 living:—

Ages.								Males	Females.
Under one year	...	...	...	...	...	...	...	215.19	210.09
1 and under 5 years	...	...	...	...	...	...	...	63.04	68.57
5 " 10 "	...	...	...	...	...	...	...	10.46	11.66
10 " 15 "	...	...	...	...	...	...	...	6.50	8.48
15 " 20 "	...	...	...	...	...	...	...	7.25	9.34
20 " 30 "	...	...	...	...	...	...	...	9.38	10.94
30 " 40 "	...	...	...	...	...	...	...	13.06	14.56
40 " 50 "	...	...	...	...	...	...	...	19.48	17.98
50 " 60 "	...	...	...	...	...	...	...	29.37	26.88
60 and upwards	...	...	...	...	...	...	...	87.65	92.00

12. In the attached chart the death-rates of infants under one year of age per 1,000 of births in towns in 1898 are contrasted with those registered in the rural circles. In England and Wales the death-rate of infants under one year of age to 1,000 births registered in decennium ending in 1894 was 146, and the general death-rate for the same period was 19 per 1,000 of population. In the Punjab for the 10 years ending in 1898 the infant death-rate was 234, and the general death-rate of the Province 34 per *mille* of population. Although these figures show how unhealthy this Province is compared with England and Wales they, nevertheless, show that the *proportion* between the infant and general death-rates of these two countries is very nearly the same—a point which goes to show how steadily the system of registration is improving in this Province.



NOTE.—Black lines in
Red

In many towns the proportion of infant mortality is much higher than in the country. This can be easily accounted for by the fact that there is less overcrowding and defective ventilation in the rural than in the urban areas. The chart further shows those towns in which an abnormal death-rate among infants goes to swell the total death-rate of the urban population. In the following towns the death-rate among infants was excessively high :—

Dera Ismail Khan	...	...	400	Karnál	...	...	...	327
Wazirabad	...	...	374	Heshiárpur	...	...	...	319
Maghiána	...	...	364	Chúnián	...	...	...	306
Kaithal	...	...	331	Ráwalpindi	...	...	...	300

In the rural circles the infant death-rates were very high in—

Dera Ismail Khan	...	...	308	Jullundur	...	...	...	252
Dera Gházi Khan	...	...	270	Karnál	...	...	...	243
Ludhiána	...	...	265	Mooltan	...	...	...	241
Amritsar	...	...	260					

In the 45 principal towns out of 52,116 total births registered in 1898, no less than 12,766 infants died under one year of age, showing a death-rate of 245 per 1,000 of births. In the rural circles the death-rate of infants in 1898 was 226.

13. Annual Form No. V shows the death-rates registered according to Deaths according to classes. In the following table the rates are contrasted with those of the previous year :—

	1898.	1897.
Muhammadans	31·19	31·24
Hindús	30·86	30·78
Native Christians	19·54	17·25
Other classes	79·61	114·55

14. There is an increase in the death-rate of Native Christians. The increase was most marked in the district of Gurdáspur, in which the death-rate rose from 19·82 to 30·45 per 1,000, showing what the real figures ought to be. There is no reason why Native Christians should be healthier than other natives.

The high death-rate under “other classes” is due to an error in the classification of population as noticed in previous reports.

15. There were 151 births and 88 deaths registered among the European and Eurasian population, showing a birth-rate of 18·1 and a death-rate of 10·55 per 1,000 of population. During the previous year the birth-rate was 14·39 and the death-rate 9·11. The figures for 1898 show that greater attention has been paid by the European population to the registration of their births and deaths than in previous years. These figures are still probably far below what they ought to be.

16. The vital statistics of cantonments are given as a supplement to Annual Form No. VI. Registration is so defective in these cantonments that any conclusions drawn from them would be useless. In 1898 there was a birth-rate of only 9 registered in the cantonments and a death-rate of 15 per 1,000 of population. There were 30 deaths registered from cholera in the cantonment of Umballa.

17. The following table gives the results of the inspection of birth and death registers by Divisional Inspectors, Vaccinators, Tahsildárs and Náib-Tahsildárs during the year 1898:—

DIVISIONS.	DIVISIONAL INSPECTORS.				VACCINATORS.				TAHSILDARS AND NAIB-TAHSILDARS.			
	Number of entries of births examined.	Number of omissions of births detected.	Number of entries of deaths examined.	Number of omissions of deaths detected.	Number of entries of births examined.	Number of omissions of births detected.	Number of entries of deaths examined.	Number of omissions of deaths detected.	Number of entries of births examined.	Number of omissions of births detected.	Number of entries of deaths examined.	Number of omissions of deaths detected.
Delhi	12,306	877	9,702	451	110,986	2,470	90,625	1,694	8,283	131	1,673	117
Jullundur .. .	59,094	1,832	44,212	815	116,399	684	81,258	238	16,322	272	13,665	163
Lahore	No Divisional Inspector.				254,283	2,233	172,101	770	346	80	378	70
Ráwalpindi .. .	22,851	879	15,410	453	101,751	2,110	68,607	1,106	Not given	159	Not given	132
Pesháwar . . .	9,027	1,476	7,304	864	14,057	661	11,254	43	3,011	65	1,313	47
Deraját .. .	25,069	1,450	29,344	3,192	31,570	2,793	27,015	579	2,963	160	2,901	141
Total . . .	128,387	6,514	106,002	5,775	629,346	10,951	445,950	4,750	30,927	867	22,960	670

It will be seen that in 128,387 entries of births and 106,002 of deaths checked by the Inspectors, they found, respectively, 6,514 and 5,775 omissions or 51 omissions in births and 54 in deaths in every 1,000 entries examined. The Vaccinators checked 629,346 entries of births and 445,950 of deaths, and discovered 10,951 omissions of births and 4,750 of deaths at the rate of 17 omissions of births and 11 of deaths per 1,000 entries checked. The rates of omissions detected by Tahsildárs and Náib-Tahsildárs were 17 and 15, taking the figures of only those districts in which the number of entries checked by these officers was given.

18. The following statement shows the working of the municipal bye-laws in respect to the fines inflicted for neglect to register births and deaths:—

Statement showing the working of the Municipal Bye-law regarding the registration of births and deaths for the year 1898.

DISTRICT.	Name of Municipal Towns.	Number of persons fined for neglecting to register births.	Number of persons fined for neglecting to register deaths.	Aggregate of fines inflicted.
				Rs. a. p.
Hissár	Hánsi .. .	3	..	10 0 0
Rohtak	Rohtak .. .	20	..	15 4 0
	Beri .. .	2	..	1 0 0
Gurgáon	Hodal .. .	16	7	13 15 0
Delhi	Delhi .. .	1	11	1 8 0
	Sonepat .. .	6	..	6 0 0
Karnál	Pánipat .. .	1	1	7 0 0
Umballa	Umballa .. .	..	1	1 0 0
Kángra	Kángra .. .	..	1	1 0 0
Hoshiárpur	Anandpur .. .	1	3	1 0 0
Jullundur	Jullundur .. .	..	4	4 0 0
Ludhiána	Jagrón .. .	3	1	2 8 0
	Ráikot .. .	2	..	1 12 0
Mooltan	Mooltan .. .	1	..	1 4 0
	Shujábad .. .	1	..	1 0 0
Jhang	Chinot .. .	..	1	5 0 0
Lahore	Lahore .. .	2	6	7 0 0
Ráwalpindi	Attock .. .	..	1	0 4 0
Pesháwar	Pesháwar .. .	2	..	4 0 0
Bannu	Kálábágh .. .	2	..	2 0 0
Dera Ismail Khan	Dera Ismail Khan .. .	1	1	0 5 0
Dera Gházi Khan	Dera Gházi Khan .. .	2	..	1 0 0
	Jámpur .. .	1	..	1 0 0
	Total ...	67	38	88 12 0

Out of 150 municipal towns there were only 23 in which fines for neglecting to register births and deaths were imposed. The number of persons fined was 105 and the amount of fines inflicted was Rs. 88-12-0. During the previous year, the number of persons fined was 59 and the fines inflicted amounted to Rs. 44-6-0. The fines inflicted in Rohtak, Hodal, Hānsi and Panipāt were very high.

Section VI.—Chief Diseases.

Deaths from different diseases, 1867 to 1898.

19. In the following table the death-rates from the principal diseases from the year 1867 to 1898 are shown:—

1							2	3	4	5	6	7
YEAR.							DEATHS PER 1,000 OF POPULATION FROM—					
							Cholera.	Small-pox	Fevers.	Dysentery* and diarrhoea.	Injuries.	All other causes
1867	...	...	...	...	...	...	2.73	1.35	11.00	not given	0.26	4.37
1868	...	...	...	...	...	...	0.03	1.36	8.66	1.02	0.27	2.31
1869	...	...	...	...	...	...	0.53	3.05	15.64	1.77	0.29	2.87
1870	...	...	...	...	...	...	0.03	1.55	15.74	1.56	0.26	3.10
1871	...	...	...	...	...	...	0.02	1.46	12.21	1.24	0.25	5.60
1872	...	...	...	...	...	...	0.50	1.36	15.14	1.33	0.25	6.04
1873	...	...	...	...	...	...	0.01	1.47	12.57	1.12	0.27	4.85
1874	...	...	...	...	...	...	0.004	0.60	10.90	0.94	0.23	5.30
1875	...	...	...	...	...	...	0.36	0.78	16.00	1.57	0.30	5.55
1876	...	...	...	...	...	...	0.33	0.59	20.09	1.56	0.27	5.55
1877	...	...	...	...	...	...	0.001	0.70	12.54	1.01	0.29	5.52
1878	...	...	...	...	...	...	0.01	2.30	25.19	1.83	0.33	6.29
1879	...	...	...	...	...	...	1.49	2.83	27.54	1.69	0.30	5.13
1880	...	...	...	...	...	...	0.01	0.52	18.74	1.18	0.32	6.25
1881	...	...	...	...	...	...	0.30	0.38	20.32	0.99	0.32	7.41
1882	...	...	...	...	...	...	0.002	0.24	18.40	0.85	0.30	6.90
1883	...	...	...	...	...	...	0.01	0.64	16.25	0.77	0.23	7.29
1884	...	...	...	...	...	...	0.03	0.87	24.71	0.97	0.29	8.16
1885	...	...	...	...	...	...	0.10	0.40	18.40	0.94	0.29	6.77
1886	...	...	...	...	...	...	0.0006	0.57	17.85	0.95	0.33	6.91
1887	...	...	...	...	...	...	0.47	0.87	23.78	1.30	0.32	7.57
1888	...	...	...	...	...	...	0.79	0.90	20.16	0.99	0.32	6.73
1889	...	...	...	...	...	...	0.15	0.42	22.75	0.96	0.34	7.00
1890	...	...	...	...	...	...	0.18	0.47	36.75	0.91	0.30	8.25
1891	...	...	...	...	...	...	0.49	0.17	21.52	0.59	0.29	6.08
1892	...	...	...	...	...	...	3.70	0.54	34.83	1.06	0.32	9.08
1893	...	...	...	...	...	...	0.03	0.20	18.95	0.79	0.35	7.81
1894	...	...	...	...	...	...	0.005	0.30	25.07	0.87	0.34	9.94
1895	...	...	...	...	...	...	0.03	0.41	19.08	0.76	0.33	8.69
1896	...	...	...	...	...	...	0.25	2.19	19.15	0.68	0.35	8.92
1897	...	...	...	...	...	...	0.03	0.78	20.57	0.77	0.35	8.54
1898	...	...	...	...	...	...	...	0.24	20.35	0.77	0.36	9.33

* Up to the year 1890 deaths were registered under the general head "Bowel-complaints."

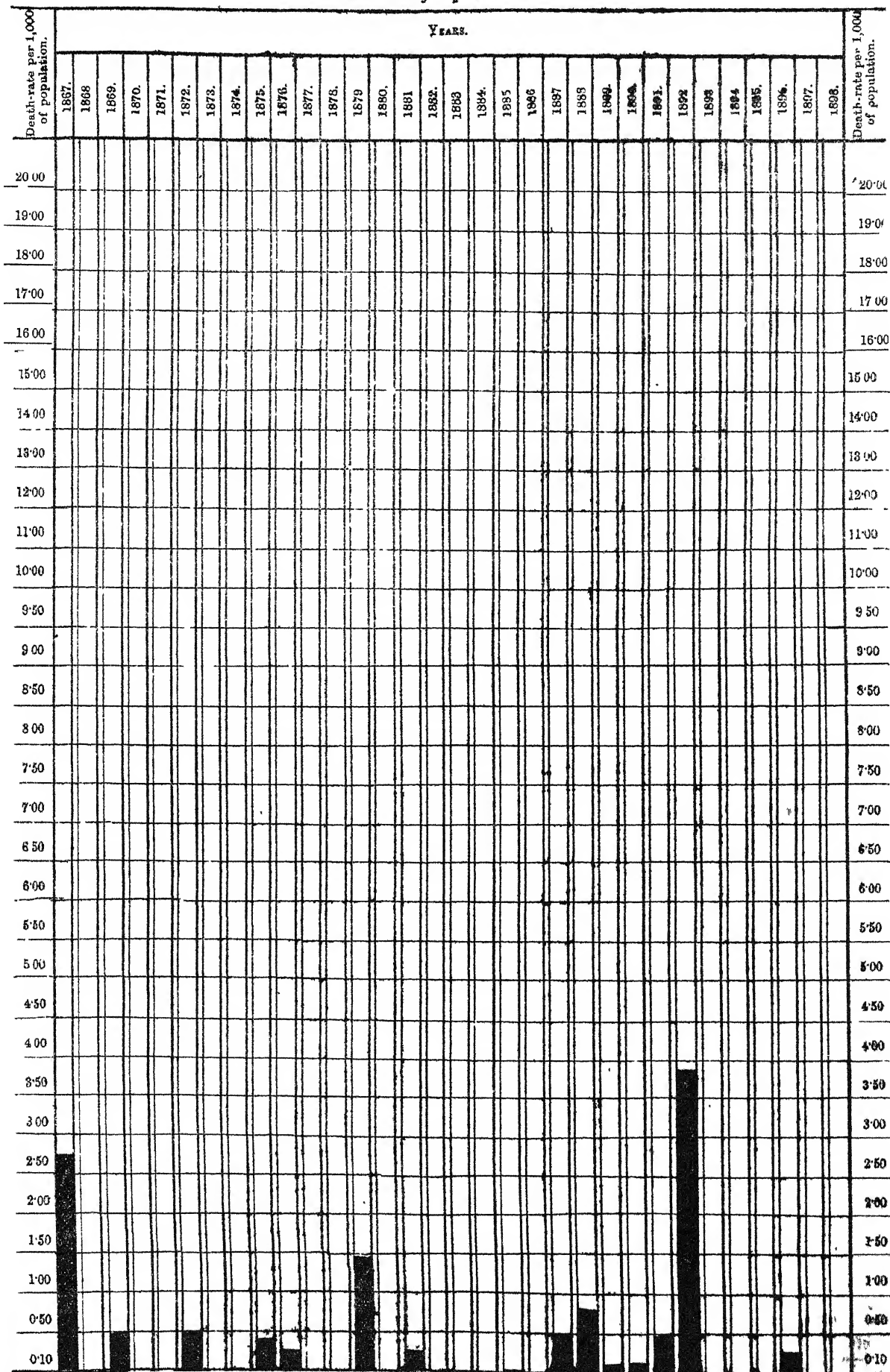
ending 1897.

Death-rate per 1,000 of population.	CHOLERA.		SMALL-POX.		FEVER		DYSENTERY AND DIARRHŒA.		CHEST DISEASES.		Death-rate per 1,000 of population
	1898.	Average for ten years ending 1897.	1898.	Average for ten years ending 1897.	1898.	Average for ten years ending 1897.	1898.	Average for ten years ending 1897.	1898.	Average for ten years ending 1897.	
24.00											24.00
23.00											23.00
22.00											22.00
21.00											21.00
20.00											20.00
19.00											19.00
18.00											18.00
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1.50											1.50
1.00											1.00
0.50											0.50
0.10											0.10

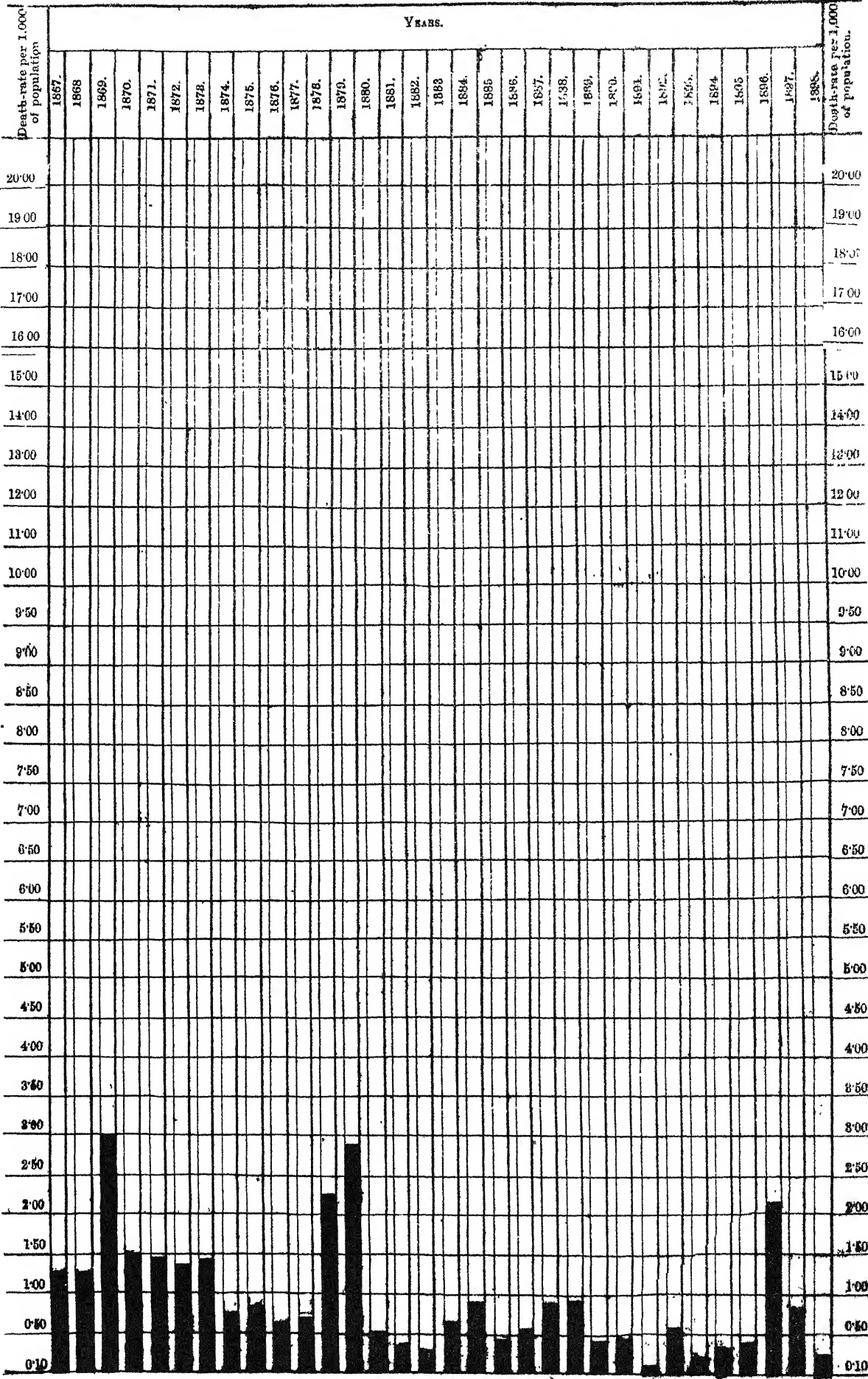
Red lines indicate the average for ten years ending 1897.

CHART.

Showing the rise and fall of Cholera Mortality in the Punjab Province from 1867 to commencement of registration to 1898.



Showing the rise and fall of Small-pox Mortality in the Punjab Province from 1867 to commencement of registration to 1898.



20. The first of the three preceding charts shows, at a glance, the rate of mortality from cholera, small-pox, fevers, dysentery and diarrhoea and chest diseases, for the year 1898 and the average annual death-rate for the 10 years ending 1897.

As regards epidemic diseases this year is better than the average for ten years; fever was also less prevalent, but dysentery and diarrhoea and chest diseases are just equal to the average for the last ten years. We see at once how the mortality from fever dwarfs all the others. Most probably a good deal of pneumonia and tubercle is put down as fever. This year I have had charts prepared which show much more readily the difference in mortality caused by different diseases and also the rise and fall in the death-rates of each disease for each year since registration was instituted.

PLAGUE.

21. There were 1,563 deaths registered from plague in the district of Jullundur and 388 in that of Hoshiarpur in 1898. As a detailed report on plague drawn up by Captain C. H. James, I. M. S., has been published and reviewed by Government, it is needless to make any comments on the subject in this report.

CHOLERA.

22. The Province was practically free from cholera during 1898. With the exception of the 30 deaths that occurred from cholera in Umballa cantonment there were only three deaths recorded, *viz.*, two in the Gurgáon district and one in the Umballa district. The prescribed cholera map is omitted from this report as it would be blank, but I give a chart which shows at a glance the rise and fall of cholera mortality during the past 32 years. The years of very high mortality were 1867, 1879, and 1892, and the rise and fall of the disease in the intervening years of these three great epidemics is exhibited in the chart.

This chart clearly indicates that severe epidemics have occurred at intervals of 11 to 12 years. These years of high mortality are those in which the great Hurdwár Kumb fairs took place.

SMALL-POX.

23. There were 4,998 deaths from small-pox during 1898 against 16,077 in the previous year. In this chart I should have liked to have been able to give, in juxtaposition, the best vaccinated districts with the small-pox mortality so as to show how entirely the disease may be stamped out by efficient vaccination, but it would entail considerable enlargement of the chart and the subject comes more directly under the head of vaccination, and will therefore be noted fully in the Vaccination Report for 1898-99.

In looking at this chart one sees at a glance that small-pox was much more prevalent from 1867 to 1879 than it was from 1879 to 1898. That is, if we take the sum of the black columns for the first period from 1867 to 1879, and the sum of the black columns from 1880 to 1898, we find the first is nearly twice as long as the last, though the first is for a period of thirteen years and the second for a period of nineteen years. This latter period almost

coincides with the institution of the vaccination department as it is at the present time.

Districts with high and low mortality.

24. The districts with high and low small-pox mortality are shown below :—

HIGH MORTALITY.					LOW MORTALITY.				
<i>Districts.</i>					<i>Deaths.</i>				
Umballa	...	...	...	...	663				
Sialkot	...	...	...	...	615				
Karnál	...	...	...	...	338				
Amritsar	...	...	...	...	332				
Ferozepore	...	...	...	...	329				
Lahore	...	...	...	...	324				
Montgomery	...	...	...	...	273				
Hoshiárpur	...	...	...	...	262				
<i>Districts.</i>					<i>Deaths.</i>				
Simla	...	...	...	...	...
Kángra	...	...	...	...	3				
Bannu	...	...	...	...	4				
Rohtak	...	...	...	...	9				
Gujránwála	...	...	...	...	9				
Shahpur	...	...	...	...	9				
Gujrát	...	...	...	...	18				
Jhang	...	...	...	...	27				
Mooltan	...	...	...	...	33				

25. In the 150 municipal towns 432 deaths from small-pox were recorded, showing a ratio of 0·21 per 1,000 of population. The highest death-rates (*vide* annual Form No. VI, towns) were registered in the following towns :—

High death rates from small-pox in municipal towns.

<i>Districts.</i>			<i>Towns.</i>			<i>Death-rates.</i>		
DELHI	...	...	Farídabad	...	...	4·22	per mille.	
HOSHIARPUR	...	...	Tánda and Urmar	...	...	4·21	"	
Ditto	...	...	Garhdiwála	...	...	2·97	"	
AMRITSAR	...	...	Majitha	...	...	2·65	"	
SIALKOT	...	...	Pasrúr	...	...	2·17	"	
MONTGOMERY	...	...	Pákpattan	...	...	1·99	"	
SIALKOT	...	...	Zafarwál	...	...	1·63	"	
FEROZEPOR	...	...	Zira	...	...	1·61	"	
GURGAON	...	...	Hodal	...	...	1·15	"	
GURDASPUR	...	...	Batála	...	...	1·10	"	

FEVERS.

26. The accompanying chart shows the mortality registered from fevers year by year since 1867 up to the year under review. It will be seen that the mortality was much less from that year up to 1877. The only cause for this can be that a great number of deaths in those eleven years were never registered.

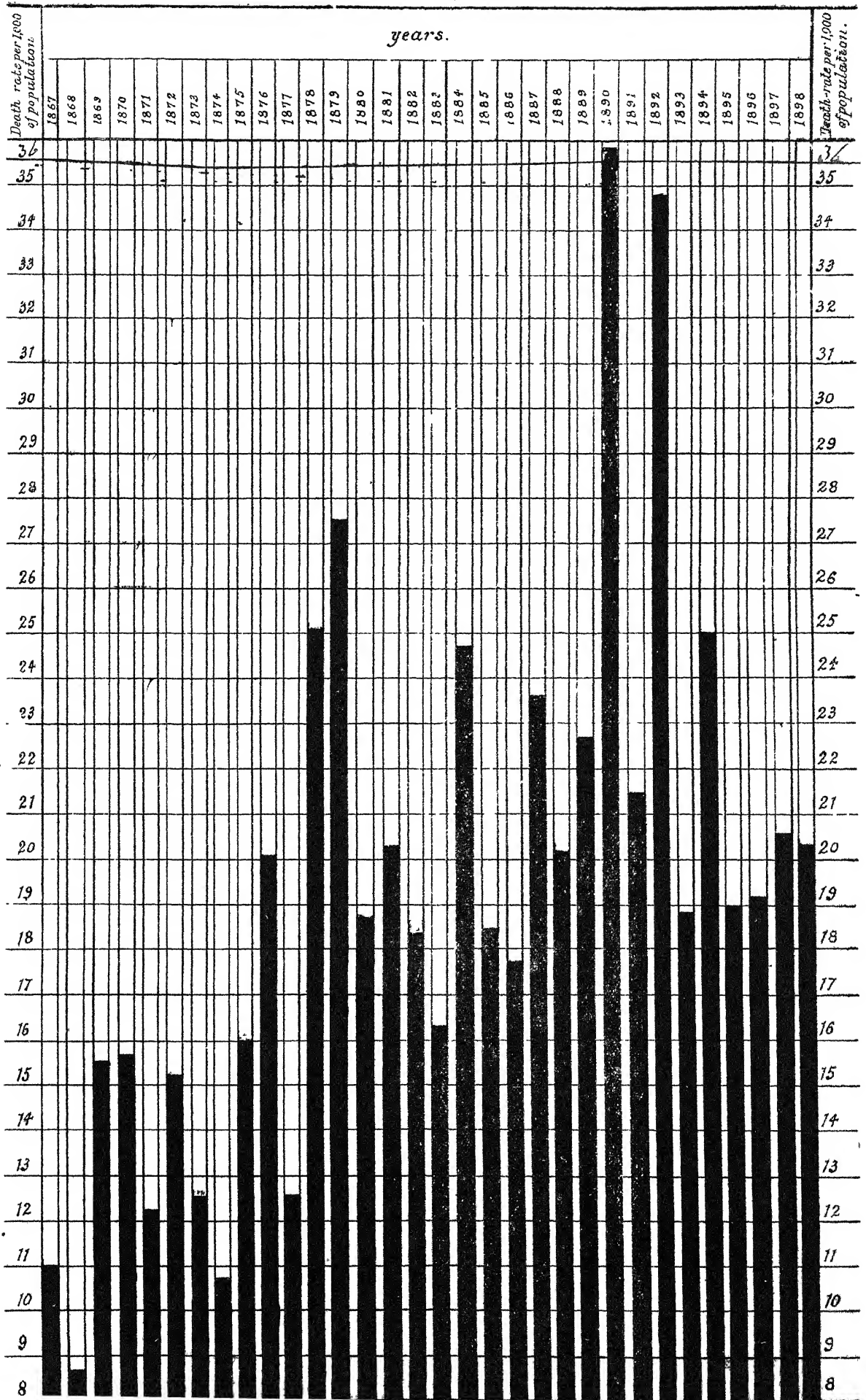
In 1898 there was a total of 418,206 deaths registered from fevers against 422,826 in 1897 and 393,535 in 1896.

Districts with high and low fever death-rates.

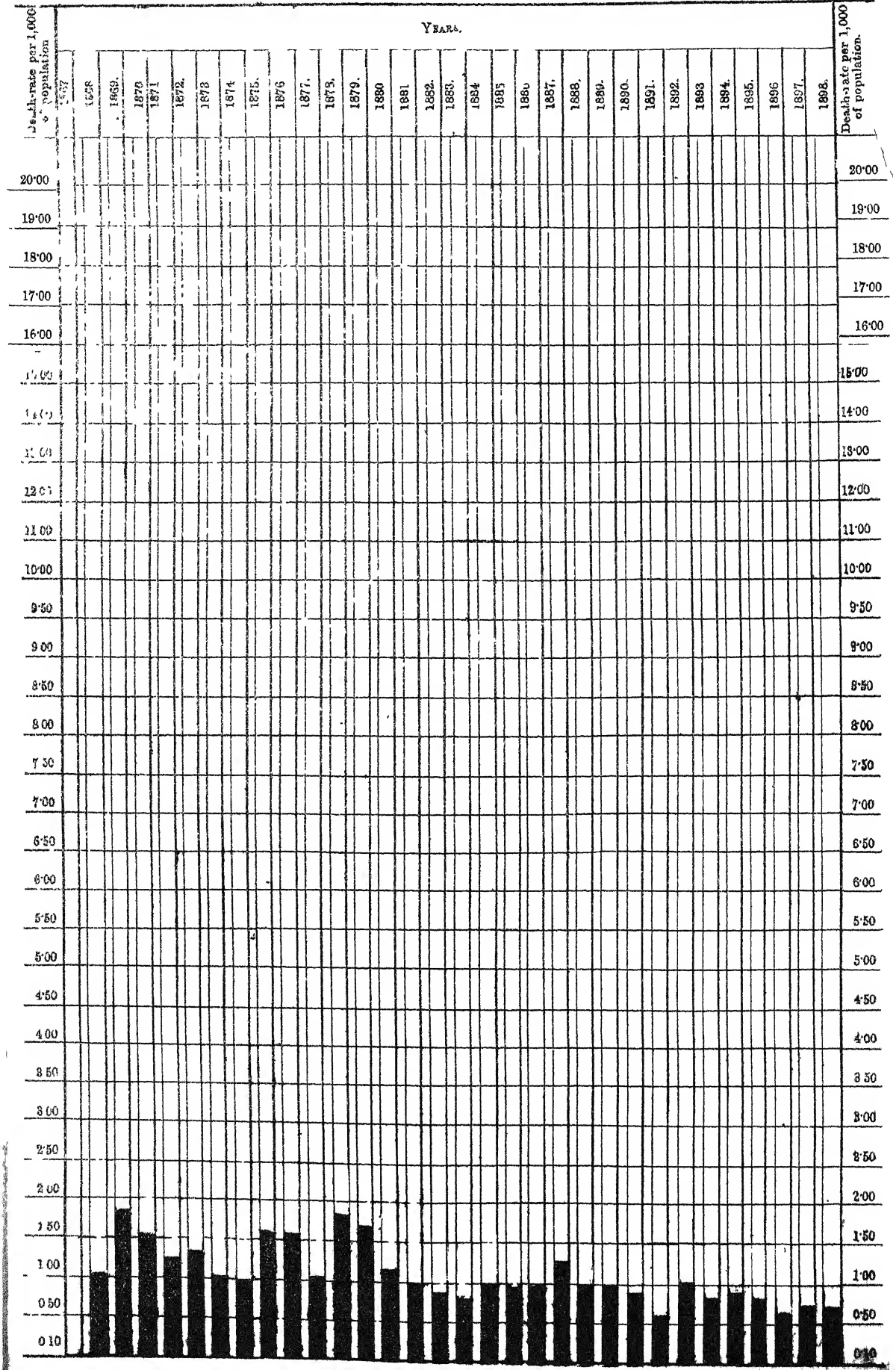
27. The districts with the largest death-rates were—

							<i>Death-rates.</i>
Dera Ismail Khan	...	...	...	...	...	...	32·26
Bannu	...	...	...	...	...	...	27·99
Gujránwála	...	...	...	...	...	...	26·97
Muzaffargarh	...	...	...	...	...	...	26·29
Gurgáon	...	...	...	...	...	...	26·03
Karnál	...	...	...	...	...	...	25·06
Kohát	...	...	...	...	...	...	24·86
Dera Gházi Khan	...	...	...	...	...	...	24·26

commencement of registration to 1898.



Showing the rise and fall of *Dysentery and Diarrhœa Mortality* in the Punjab Province from 1867 to commencement of registration to 1898.



The districts which recorded the lowest rates were—

	Death-rates.							
Simla	9.76
Montgomery	10.51
Jullundur	13.88
Hazára	14.88
Hoshiárpur	15.30

DYSENTERY AND DIARRHŒA.

Chart showing deaths from dysentery and diarrhœa.

28. The rise and fall of the mortality from these diseases year by year since 1867 will be seen at a glance from the annexed chart.

Looking at this chart one cannot help noticing that in the period prior to 1880 there were many more bad years than there were afterwards, and that since the year 1887 in no year has the mortality exceeded 1.4 per mille.

29. The deaths registered from dysentery and diarrhœa are given in Districts with high death-rates from dysentery and diarrhœa. annual Form No. X appended to this report. There is nothing in the statement that deserves any particular notice except that in Gurgáon, Delhi, Simla, Hoshiárpur, Gurdáspur, Siálkot and Dera Ismail Khan the death-rate was higher than in the other districts of the Province, and that these districts generally have also registered a higher death-rate in previous years. There is no apparent reason for this.

INJURIES.

Deaths from injuries

30. Under the head of Injuries 7,323 deaths were registered in the Province against 7,265 in the previous year.

Deaths from suicide.

31. From suicide 351 deaths were registered, 148 were males and 203 females, and the district in which the largest number of deaths from this cause occurred (13 males and 49 females) was Gurgáon as usual.

From wounding, &c.

32. Under the head of wounding 715 deaths were recorded, and the districts which registered the largest number were Pesháwar (95), Ráwalpindi (64), Bannu (60) and Kohát (52).

Deaths from accidents

33. The number of deaths due to accidents was 4,913; of these no less than 2,330 were caused by drowning.

Deaths from snake-bite.

34. The number of deaths caused by snake-bite amounted to 1,160 against 1,008 in the previous year. The districts in which the largest number of deaths occur are given below, with the mortality registered in them since 1891 to 1898—

Districts	1891	1892.	1893.	1894.	1895.	1896.	1897.	1898.
Mooltan	69	59	50	83	93	77	68	82
Jhang	66	46	59	75	70	70	65	87
Montgomery	69	70	79	66	73	49	60	70
Lahore	40	50	83	86	99	73	82	93
Gujránwála	69	94	84	120	117	145	155	146
Shahpur	36	43	49	55	70	36	57	67
Ráwalpindi	43	35	48	58	68	50	49	63
Muzaffargarh	40	55	47	65	73	53	49	57

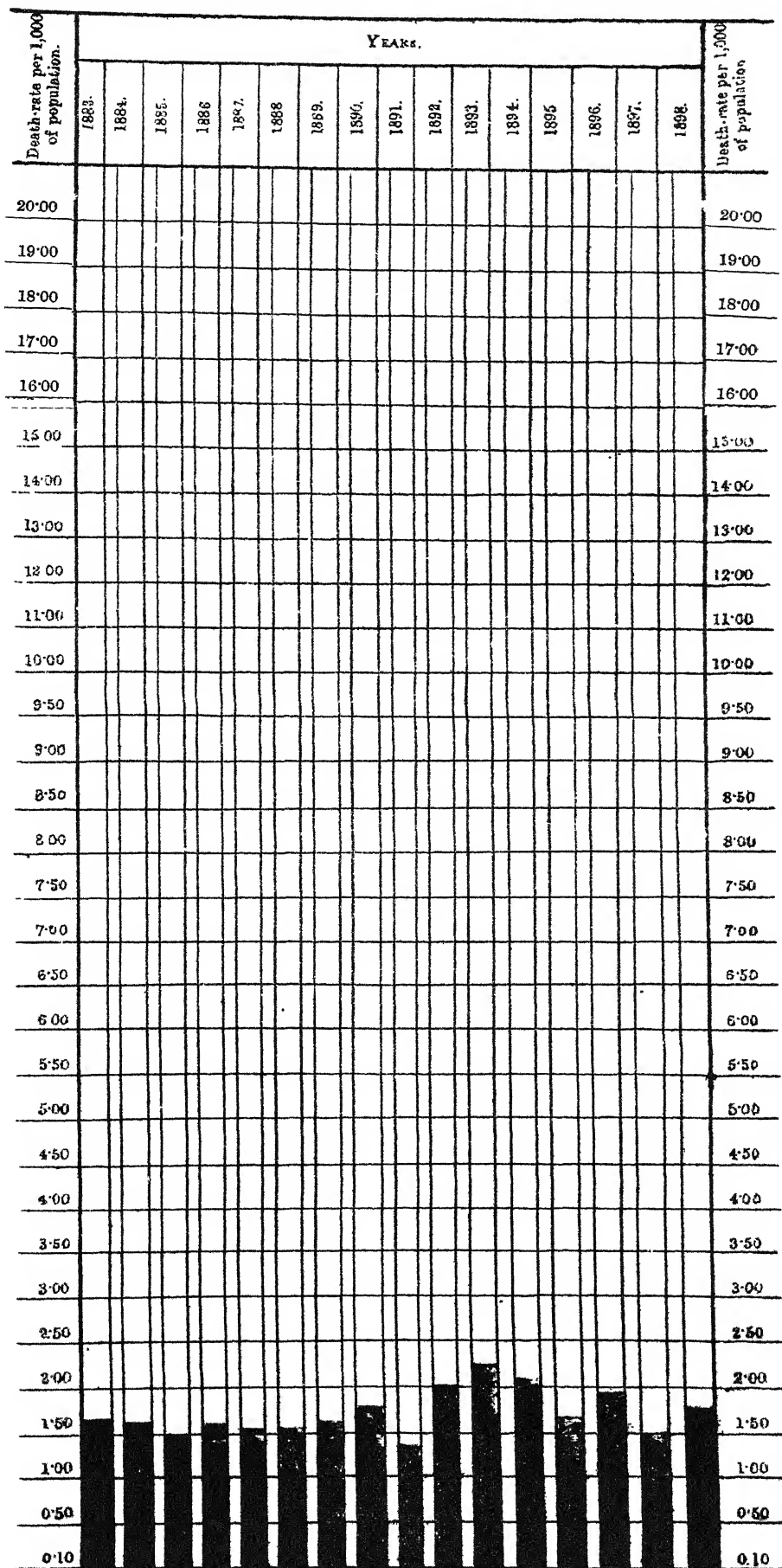
It will be seen from the above table that of late years the mortality from snake-bite has risen considerably. There seems no reason for this.

35. Under the head of hydrophobia 147 deaths were registered against 129 last year. This increase shows how important it is that means should be provided for the cure of the sufferers from this fatal disease. The only treatment at present known to be of any use is that introduced by Monseur Pasteur. It is most unfortunate that the poorer natives of India are unable to avail themselves of this treatment. It is hoped that the time is not far distant when a Pasteur Institute will be established in the Panjab and the people of India will no longer suffer without the possibility of any relief.

36. From all other causes 191,847 deaths were registered, including 37,299 deaths from cough and chest diseases.

The rise and fall of mortality from chest diseases may be seen in the accompanying chart. One cannot help noticing that the mortality from these diseases since 1890 has been higher than it was before that year. This is no doubt due to greater care both in registration and diagnosis of the disease, the deaths formerly being entered under the head of Fevers.

Chart showing the rise and fall of mortality from chest diseases in the Panjab Province from 1883 to 1898.



Section IX.—Sanitary Works.

37. The following statement shows the important water-supply and drainage schemes, &c., which were either completed, in progress or under consideration during the year in different parts of the Province :—

Name of District.	Locality.	Name of work.	Amount of estimate.	Outlay to date.	REMARKS.
			Rs.	Rs.	
Hissár ...	Bhiwáni ...	Bhiwáni Water-works .	2,20,675	307	Estimate prepared and submitted for sanction.
Delhi ...	Delhi .	Extension of Delhi water-works.	1,82,722	...	Estimate sanctioned but funds not yet granted.
Do. ...	Do. ...	Delhi Drainage Works...	6,09,042	47,553	Length of surface drains constructed during the half year, 10,676 cubic feet. Total length of drains constructed to end of December 1898, 57,676 cubic feet. The work is in progress.
Umballa ...	Umballa City	Drainage Scheme ..	...	...	Rough project called for by Commissioner and Superintendent, Delhi Division, is under preparation by Executive Engineer.
Simla ...	Simla ...	(1) Seog Reservoir ...	2,02,347	67,562	From 1st July to 31st December 1898 the progress was made as follows:— Excavation, C. feet. 103,228 Concrete „ 39,200 C. R. Masonry „ 5,050 If the work had not been stopped by Government from 23rd July to 1st November 1898 it would have been practically completed by 31st December 1898.
Do. ...	Do. ...	(2) Additional Feed Reservoir, Cherát-Nalta.	10,484	9,416	Completely finished.
Do. ...	Do. ...	(3) Gravitation Pipe supply to Cherát-Nalta Pumping Station.	2,40,292	7,300	Project submitted to the Secretary to Government, Punjab, Public Works Department, for approval.
Do. ...	Do. ...	(4) Additions and alterations to filter beds Nos. 1, 2 and 3.	18,594	7,141	Filter beds Nos. 2 and 3 nearly finished and work on filter bed No. 1 postponed until funds are provided by Simla Municipality.
Do. ...	Do. ...	(5) Separation of the drinking and sewer flushing water supplies and improvements to sanitary arrangements in Simla.	8,096	54	Estimate submitted for sanction.

Name of District	Locality.	Name of work.	Amount of estimate	Outlay to date.	REMARKS.
			Rs.	Rs.	
Simla	Simla	(6) Jack High Level Pipe line.	Rough estimate 27,000	82	Fair estimate under preparation.
Do	Do	(7) Tunnelling at No. 3 Spring	2,996	1,220	Completed
Do	Do	(8) Mahassu Reservoir Project	32,798	1,833	Estimate for Rs 32,798 submitted for sanction
Ludhiana	Ludhiana	Boring on the site of proposed wells for water supply, Ludhiana	414	408	Boring taken and the water has been approved by the Chemical Examiner Estimate for constructing experimental well has been sent to Commissioner for sanction by Municipal Committee but not yet received back
Do.	Jagraon	Intra-mural Drainage Scheme	6,551	..	Estimate submitted to Chief Engineer, Punjab.
Do	Do	Extra-mural Drainage Scheme	8,496	...	Project submitted to Chief Engineer, Punjab.
Ferozepore	Ferozepore	Drainage Scheme, City	61,416	...	The case is under disposal with Commissioner.
Do.	Fazilka	Drainage Scheme, Fazilka	17,237	...	Estimate sanctioned.
Do	Muktsar	Drainage Scheme, Muktsar	17,292	.	Estimate submitted to Superintending Engineer for sanction but since returned to Executive Engineer with further remarks.
		<i>Sewage and Drainage Scheme</i>			
Lahore	Lahore	(a) City Project	47,863	24,457	In progress
Do	Do	(b) Anarkali Project	25,675	18,421	Work deferred for want of funds.
Do	Do	(c) Anarkali and Mozung Outfall.	77,885	55,203	In progress
Amritsar	Amritsar	Preliminary operations for water-supply	1,155	1,164	Completed.
Do	Do	Survey operations in connection with Amritsar Water-works Scheme with head works at the Bari Doab Canal.	200	212	Completed

Name of District	Locality	Name of work	Amount estimated in the	Outlay to date	REMARKS
			Rs.	P.	
Mooltan	Mooltan	Water supply at—	1 38	10	Amount in hand. The expenditure shown against this has been incurred on preliminary survey of the city and its suburbs.
Rawalpindi	Rawalpindi	Drainage Scheme, Rawalpindi	1 47 15 1/2	108	Application made to Commissioner and Superintendent, Rawalpindi Division for acquiring land under Act I of 1894 required for the purpose.
Hazara	Hazara	Water supply at—	49 0 56	46 2 62	Work completed.
Do	Ablottabad	Diversions of Town Drainage at	3 9 72		Work in abeyance under orders of the Government, vide para 1 of letter No 251 dated 17th February 1898 from Junior Secretary to Government, Punjab, to the Secretary to the Government, Punjab, P. W. D.

38. The table showing the aggregate income and expenditure of all the municipal towns in the Province is given in Appendix B to this report. The income amounted to Rs. 45,40,697, and there was a balance in hand at the beginning of the year of Rs. 9,91,384: the expenditure during the year amounting to Rs. 43,11,451.

39. The subjoined statement shows the amount expended on sanitary works under the principal heads for the years 1896, 1897 and 1898:—

Head of expenditure	DURING THE YEAR.		
	1896	1897.	1898
	Rs.	Rs.	Rs.
Conservancy establishment	5,83,174	6,35,308	5,90,777
Paving of streets	71,970	33,121	43,314
Roads and bridges	2,69,874	1,62,705	1,99,285
Drainage and sewerage .. .	1,26,608	1,02,847	96,888
Water-supply, including cleaning of tanks, &c. ...	1,66,744	2,17,183	1,65,799
Latrines	15,813	15,475	28,922
Widening of streets	2,507	1,252	115
Total	12,36,690	11,67,891	11,25,100

40. It will be seen from the above table that the expenditure on drainage and sewerage amounted to Rs. 96,888 and on water-supply, including cleaning of tanks, &c., amounted to Rs. 1,65,799 as compared with Rs. 1,02,847 and Rs. 2,17,183, the figures respectively for the previous year.

41. The total income derived from the sale of manure in all the municipal towns of the Province amounted during the year to Rs. 1,43,501, as compared with Rs. 1,49,120 in 1897 and Rs. 1,36,076 in 1896.

42. The following statement shows the works of public utility constructed by private individuals at their own expense to serve sanitary purposes during 1897-98:—

Statement showing works of public utility constructed by private individuals during 1897-98.

No.	Names of district.	Names of contributors.	Description of works and localities.	Amount expended. Rs.
DELHI DIVISION.				
1	Hissár	Ohúni Lál, son of Mata Mal, of Bhattu Kalán.	A pacca well at Bhattu Kalán ..	1,000
2	Do.	Sheo Rám, son of Dhamni, and Masánia, son of Kirpa Rám, of Bulíáli.	A pacca well at Bulíáli	2,000
3	Do.	(1) Rám Gopál, (2) Nathu Mal, and (3) Pars Rám, son of Ganga Rám, of Bhattu.	A pacca well at Bhattu	1,100
4	Rohtak	Kirori Mal, son of Talsi Rám, Maháján, of Bádli.	A pacca well and a dharm sála in the village of Bádli.	2,000
5	Do.	Kirori Mal, son of Baldeo Sahái, and Hazári Lál, son of Kishen Sahai, Mahájans, of Bádli	A pacca well near the boundary of Bádli.	1,776
6	Do.	Pír Chait Náth, Mahant of Bohar .	A tank with ghát near the boundary of Bohar.	1,500
7	Do.	Sheo Chand, Lambardár, of Bohar	A tank with gháts on the Rohtak and Kharkhauda Road.	1,200
8	Delhi	Kallan, Bania, of Nangla Gujrán .	A tank on the Bibbalgarh-Pati Road near Nangla, with pacca ghát on two sides and a kacha ghát for cattle on one side.	5,000
9	Do.	Hira Lál, son of Jai Rám, of Narela	Temple, dharm sála and pacca well on the Narela-Bághpat Road.	2,000
10	Karnál	Lála Síhu Mal, Maháján, of Koer, Tahsíl Karnál.	Pacca bathing gháts for men and women at Koei village.	5,000
11	Do.	Ruldu Mal, son of Hardwári Mal, Maháján, of village Atewa, Tahsíl Kaithal.	Pacca bathing gháts for men and women and a dharm sála at Mauza Atewa, Tahsíl Kaithal.	2,500
JULLUNDUR DIVISION.				
1	Kángra	Brother Rupa and Bhikha, Súd, of Garli, Tahsíl Dera.	Pacca masonry tank constructed in Mauza Garli, Tahsíl Dera, on Garli Road.	5,642
2	Do.	Ránjho, Súd, of Bahan, Tahsíl Dera	Pacca masonry tank in Mauza Bohan on road from Dera to Jawálmukhi.	2,237
3	Ferozepore	Rám Chand, son of Basti Rám, Bania, resident of village Kalyán Sukkha, Thána Moga.	Pacca well on road from Bhágapurána to Nathána near villages Kalyán and Nathána.	2,000
LAHORE DIVISION.				
1	Lahore	Háji Núr Muhammad and Mián Mír Burhán of Gunja Kalán, Tahsíl Chúníán.	A rest-house with a very large compound and out-houses on the Kasúr and Fázilka Road outside the village Gunja Kalán, Tahsíl Chúníán.	8,500
2	Do.	Mirza Mobárak Beg, of Patti, Tahsíl Kasúr.	A rest-house with a large compound, out-houses and walls attached thereto, in Mauza Patti, Tahsíl Kasúr.	8,000
3	Amritsar	Har Karan Sahái	A pacca well with a dwelling-house at village Músa for the convenience of travellers	1,200
4	Gurdáspur	Rám Saran Dás, son of Nand Lál, Khatri, of Batála.	A pacca sarai near the railway station at Batála purely for public convenience and comfort.	3,000
5	Do.	Bishamber Dás, Hakím, son of Mulkh Ráj, Arora, of Batála.	Ditto ditto ditto ditto	7,000
DEBAJAT DIVISION.				
1	Muzaffargarh	Báwa Dhián Dás, Udási Fakir ...	Pacca well roofed, in the town of Muzaffargarh.	2,150

43. In the subjoined table the death-rates from cholera, small-pox, fevers and dysentery and diarrhoea are given for the five years preceding and for the period since the introduction of drainage or water-supply, or both, in the undermentioned towns and rural circles—

Towns and rural circles.	Date of completion of works of		Average annual death-rate since the introduction of drainage or water supply, or both.				Average annual death-rate for the five years preceding the introduction of drainage or water-supply, or both.				REMARKS.
	Drainage.	Water-supply.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	
TOWNS.											
Delhi	1893	...	1.0	20.8	1.6	0.4	0.1	26.7	1.9	
Umballa	1895	0.1	0.9	11.2	4.4	0.5	0.4	19.3	6.1	
Simla	1893	1893 ⁴	...	0.3	14.9	0.6	...	1.1	17.1	1.4	* The works were begun in 1876 and completed in 1893.
Ludhiána	1893	...	0.1	14.4	3.3	0.9	1.4	25.8	2.3	
Lahore	1881	0.9	0.8	19.9	1.6	1.9	1.6	27.8	2.3	
Amritsar	1885	...	0.3	0.2	26.7	1.9	0.9	1.3	32.3	3.2
Dalhousie	1891	...	0.2	12.4	2.5	...	...	9.6	2.4	
Gujránwála	1892	...	0.2	0.4	14.5	1.2	0.5	0.6	19.7	1.7
Sialkot	1898	...	0.1	1.1	16.9	2.8	...	0.9	9.3	3.5
Ráwalpindi	1887	0.9	0.4	22.5	2.4	0.5	0.1	16.4	3.4	
Murree	1894	0.3	...	18.1	1.7	0.7	0.4	14.8	0.9	
Kohát	1892	1893	...	1.0	17.4	1.4	6.5	1.9	20.9	2.2
Kálka	1890	0.4	0.1	16.8	2.6	1.7	0.2	15.2	3.9	
Jullundur	1891	...	0.4	0.3	18.0	2.3	0.5	0.1	15.9	2.9
Bunga	1890	...	0.5	0.5	13.6	3.8	0.2	1.3	13.3	2.7
Abbottabad	1892	0.6	0.1	9.7	0.4	0.6	...	8.9	0.7	
Harípur	1896	0.2	2.2	13.3	1.0	4.0	0.2	17.3	2.3	
Pesháwar	1888	1892	0.6	1.6	22.1	1.3	1.4	4.2	19.3	1.9
RURAL CIRCLES.											
Gurdáspur	1894	...	0.3	22.8	1.0	0.2	0.1	38.7	2.1	
Kalánaur	1894	...	0.2	21.1	1.1	...	0.8	32.9	2.5	
Dunera	1894	...	0.2	20.9	0.3	0.2	...	21.5	0.9	
Shahgarib	1894	...	0.3	24.9	1.2	0.1	0.3	42.4	1.3	
Fatehgarh	1894	...	0.1	21.7	0.9	0.1	0.2	31.2	2.2	
Kahnúwán	1894	...	0.3	19.8	1.4	...	0.1	41.8	1.2	
Dera Nának...	1894	...	0.1	21.2	0.8	...	0.1	37.3	0.8	

In paragraph 13 of the Review of the Sanitary Report for 1897 a statement was given showing the death-rates from cholera, small-pox, fevers and bowel-complaints before and after the introduction of water-supply in certain towns of the Punjab. I have given the statistics this year in the form of a chart, as it shows the results at a glance.

With very few exceptions, the statistics show a marked improvement in the health of towns in which the water-supply was introduced.

It is only after some years that the people take to using pipe water ; one great objection they have to pipe water is that it is so much warmer than well water. The only way to stop this is to have the reservoirs well covered and the pipes laid much deeper.

Section X.—General Remarks and Personal Proceedings.

44. Lieutenant-Colonel W. A. Crawford Roe, I.M.S., Sanitary Commissioner, Punjab, was in charge of the Department up to the 22nd of August 1898 when he proceeded on one year's furlough. I took over charge from him on that date and remained in charge to the end of the year.

The office of the Deputy Sanitary Commissioner, Punjab, was held by Captain C. H. James, I.M.S., from the 1st January to 13th November 1898, but he was engaged all that time on plague duty in the Jullundur district. On his being appointed Civil Surgeon of Dharmasala he was succeeded by Captain E. Wilkinson, I.M.S., who was in charge of the office up to the end of the year. Captain Wilkinson also worked as Plague Medical Officer, Banga, in addition to his duties as Deputy Sanitary Commissioner, Punjab, from the 14th November to the end of the year.

45. As Professor of Hygiene I delivered the usual number of lectures to the students of the Medical College in the months of November, December 1898 and January 1899.

46. Lieutenant-Colonel W. A. Crawford Roe, I.M.S., made sanitary inspections of the following towns:—In January the towns of Umballa, Lahore, Thanesar, Shahabad, Karnal and 6 villages; in February the towns of Amritsar, Jandiala, Kartarpur, Phillour, Ludhiana, Khanna and 7 villages; in March and April the towns of Lahore, Delhi and one village; in April and May the towns of Delhi, Peshawar, Rawalpindi, Murree, Kalka, Simla and one village.

I visited and inspected the following places:—In September the towns of Simla and Sanawar and the States of Theog and Kumersain and 5 villages; in October the towns of Dharmasala, Pathankot, Mandi State and 16 villages; in November the towns of Rawalpindi, Hassan Abdal, Abbottabad and Amritsar and 5 villages; in December the towns of Tarn Taran, Majitha and 4 villages.

Inspection work of Civil Surgeons and Assistant Surgeons.

17. The following table shows the number of municipal towns and smaller towns and villages inspected by the Civil Surgeons and Assistant Surgeons during the year:—

Statement showing the names of the municipal towns and the number of smaller towns and villages inspected.

No.	District	NUMBER OF TOWNS & VILLAGES INSPECTED BY				Number of days the Civil Surgeon was on tour	Number of days the Asst. and Surgeons were on tour	REMARKS & CIVIL SURGEON'S
		Civil Surgeon		Asst. & Surgeons				
		Town	Villages and smaller towns	Towns	Villages and smaller towns			
1	Hissar	1	32			27		Inspected sanitation, vaccination and vital statistics. Sanitary inspection of towns and villages (wells, latrines and slaughter-houses), and in the necessary recommendations for inspection of factories.
2	Rohilk.	5	37			26		
3	Gurgaon	13	152			46		
4	Delhi	1	7			10		* Many of the villages and especially the municipal towns were visited more than twice, but their number is not given. The inspections of vaccination, sanitation and chowkidars' memo books of births and deaths was done. Many smaller towns and villages inspected.
5	Kulu		21	6	112	5	47	
6	Unmunda	1	*			20		
7	Simla							In every municipal town and village the chief persons were collected and along with them the water supply, drains and the moure godowns were inspected. The chief defects were pointed out to them and the disadvantages of the present state were described. It appears that the people are getting sensible, though very slowly.
8	Kangra	6	10		137	1	10	
9	Hoshiarpur	14	120			61		
10	Jullundur	6	90			40		Vaccination and sanitation inspection.
11	Ludhiana	5	25			6		
12	Ferozepur	8	48		19	15	2	
13	Mooltan	15	10			33		* The towns and villages were inspected when going to inspect the dispensaries and vaccination, but their number is not given. The Civil Surgeon could not inspect any outlying villages.
14	Jhang	3	223			13		
15	Montgomery		*	3	72			
16	Lahore	6		1		7	1	Inspected the towns in which dispensaries are situated. Pointed out defects to village officials and others resident therein, and how the defects can best be removed and how to prevent contamination of the soil and drinking water.
17	Amritsar	7	48			25		
18	Gurdaspur	3	33			3		
19	Sialkot	4	10			10		All these were inspected during the short tour of vaccination inspection not exceeding 24 hours or so. The registers of 21 villages were examined. The sanitation of 3 municipal towns and 33 villages was inspected during the year.
20	Gujrat	3	229			78		
21	Gujranwala	6	101			10		
22	Shahpur	10	16			48		Vaccination inspections were made, but birth and death registers were examined.
23	Jhelum	3	55			50		
24	Rawalpindi	3	15			16		
25	Hazara	1	1			9		The water supplies were inspected and defects in the construction of the wells, points, drains, and the drainage and general sanitary state of the surroundings of the towns and villages were seen and their defects pointed out to the bodies concerned or brought to the notice of the Deputy Commissioner of the district.
26	Peshawar							
27	Komal	1	6			6		
28	Bannu	3						Inspected sanitation and tested the accuracy of chowkidars' register of births and deaths. Usual inspections of towns and village sites, wells, &c., were made.
29	Dera Is Khan	5	3			6		
30	Dera G. Khan	2	11		1	23	1	
31	Muzaffargarh	4	303			63		Also inspected 1241 vaccination operations and chowkidars' memo books of births and deaths of 10 villages, but no caissons were discovered.
Total		150	1,662	11	371	753	91	

This statement shows that in 1898 the Civil Surgeons inspected 150 towns and 1,662 villages compared with 134 towns and 2,108 villages in 1897. The Assistant Surgeons inspected 11 towns and 371 villages, compared with 14 towns and 159 villages.

48. From the Lawrence Military Asylum, Sanáwar, one death of a boy was reported during the year. The average strength of boys was 273.42 and of girls 205.75. The average number daily sick amongst boys and girls, respectively, was 4.77 and 4.39 or 1.74 and 2.13 per cent of strength. The number of total admissions from different diseases was 144 amongst boys and 113 amongst girls, the largest number of admissions being from simple, continued and intermittent and remittent fevers.

I inspected this Asylum on the 15th of September 1898, and submitted my report.

49. In the Lawrence Memorial Asylum, Murree, there was no death registered. The average strength of the Asylum was 67.95 for males and 64.87 for females. The average number daily sick was 0.50 and 0.20, respectively, showing a percentage of 0.68 for boys and 0.12 for girls. There were 47 admissions from different diseases during the year.

50. The following statement shows the birth and death-rates in the selected villages situated on the Western Jumna Canal, in the districts of Hissár, Rohtak, Delhi and Karnál since 1893, the year from which the tabulation of special statistics in those areas was instituted:—

DISTRICTS	BIRTH-RATE PER 1000						DEATH-RATE PER 1000					
	1893	1894	1895	1896	1897	1898	1893	1894	1895	1896	1897	1898
Hissár	34	42	40	39	35	3	23	25	27	25	12	28
Rohtak	40	43	50	48	46	15	22	23	23	35	28	31
Delhi	41	46	42	47	48	4	27	27	23	33	32	29
Karnál	40	52	51	52	55	12	17	41	39	45	13	42

51. From Appendix G. attached to this report it will be seen that 1,908 wells were cleaned and a number of platforms repaired and constructed. The district in which most substantial progress was made in this direction was Gujránwála, in which the Deputy Commissioner says "that the Municipal Committee return 410 wells as cleaned out and 32 wells as repaired, and the District Board 46 and 4, respectively."

52. With regard to the gratuitous distribution of quinine Lieutenant J. A. Dredge, I.M.S., the Civil Surgeon of Dera Gházi Khan, states that "a special sum of Rs. 60 per annum is sanctioned by the Deputy Commissioner of the district for purchase of medicines required by Vaccinators, and also a fairly large sum for the purchase of quinine for distribution to headmen of villages, Tumandárs and Tahsildárs, &c. Quinine was freely distributed in the district. Major Stephen Little, I.M.S., Civil Surgeon of Ráwalpindi, says that "quinine and sulphate of iron both to the value of Rs. 200 were purchased from the District Funds and powders and pills were made at the Civil Hospital, Ráwalpindi, and distributed through lambardárs in the villages for the use of fever and spleen cases as directed in Punjab Government letter No. 16, dated the 12th January 1894." Dr. Davis, Civil Surgeon, Gujránwála, says that "the Vaccination Staff were supplied with quinine for gratuitous distribution among fever-stricken people in the localities where the disease prevailed, and powders were also supplied to

the zaildars and lambardars of various villages through the police for distribution, which proved a great boon to the people, and was freely applied for."

53. Under the head of sewage farms there is little or nothing to be added to what was said in the report for the previous year.

See also farm

The Secretary, Municipal Committee, Delhi, says: "That a filth-trenching farm was established in Mouza Khandrat Kalán, so as to do away with the evils resulting from putting filth and then opening them for sale of manure. The area taken up is 254 *para* *bighás*; most of the land is *naẓúl*, but some of it has been leased to private owners to get right of way for the canal and also to include it in a ring fence. Most of the filth from the 11 wards within the city walls is now trampled in Khandrat Kalán, and the fields so treated are let out at a better rate than before. (1) because of the trenching, (2) on account of the canal water brought to the land. This system not only improves the *naẓúl* property, but does away with the necessity of 'putting' the filth, which is so very objectionable from a sanitary point of view. No filth is now buried in the oblong pits near the slaughter-house, and in consequence there is no direct sale of manure (or melon fields chiefly) in that locality. This new system of treating the filth, as of course affected the income from 'sale of filth,' and the income from it is hereafter will be lessened every year as the system is extended."

54. Mr. J. M. Douie, Deputy Commissioner of the Gurdáspur district, *has not received* states that "no rewards on this account were given during 1898. At the District Board Meeting held on 7th February 1898, Rs. 400 were sanctioned for this purpose, but the reports received from Tahsildars show that no village is worthy of such reward." The Delhi Division was excused from making the experiment in 1898 on the ground that some of the District Boards were bankrupt, and the funds of all have been abnormally reduced owing to famine expenditure in the past year, *viz* Punjab Government letter No. 210, dated 6th February 1898, to the Commissioner and Superintendent of the Delhi Division. This matter has been dealt with separately and a separate report submitted in accordance with paragraph 16 of Punjab Government letter No. 12, dated 5th July 1898.

55. With regard to the "village sanitary note-books" very little has been said by the District Officers. The Deputy Commissioner of Gurdáspur, Mr. Douie, says that "sanitary note-books have been kept in 12 villages in this district, but that there is nothing important to note at present in this connection. The only notes are those made when they were first started, and he doubts whether these books will ever be of much practical value."

Sanitary Board Proceedings.

56. There were no meetings held by the Sanitary Board during the year, but the following papers were submitted to the members for inspection :—

(1) Punjab Government Endorsement No. 1481, dated the 15th December 1897, regarding the proposed improvement of village sanitation by means of rewards.
Circulated, *vide* Nos 266 to 270, dated 6th January, 1898.

(2) Punjab Government No. 211, dated 9th February 1898, on the subject of exemption of the Delhi Division, from making the experiment during the current year of awarding villagers for improved sanitation of their villages.
Circulated, *vide* Nos 45 to 52, dated 24th January 1898.

(3) Minutes of the third meeting of the North-Western Provinces and Oudh. Sanitary Board, held at Lucknow, on the 21st December 1897.
Circulated, *vide* Nos 53 to 56, dated 14th April 1898.

(4) Proceedings of the twenty-fifth meeting of the Sanitary Board, Bengal, held at Calcutta, on the 11th March 1898.
Circulated *vide* Nos 60 to 64, dated 14th April 1898.

(5) Printed correspondence with a plan received, *vide* Chief Engineer, Public Works Department, Punjab, Endorsement No. 2358, dated 13th April 1898, on the subject of the drainage of the town of Ferozepore.
Circulated, *vide* Nos. 67 to 70, dated 9th May 1898.

(6) Punjab Government Proceedings Nos. 5—15, for May 1898, on the subject of term of settlement of the Neli Circle of the Kharar Tahsil, in the Umballa District.
Circulated, *vide* Nos 74 to 78, dated 28th June 1898.

(7) Correspondence (printed copy) received, *vide* Punjab Government Endorsement No. 373, dated 18th July 1898, on the subject of immediate repayment of the balance of loan for construction of water-works in the Kohát city.
Circulated, *vide* Nos 85 to 89, dated 4th August 1898.

(8) Proceedings of the fourth meeting of the North-Western Provinces and Oudh, Sanitary Board, held at Naini Tal, on 23rd June 1898.
Circulated, *vide* Nos 98 to 97, dated 31st August 1898.

(9) Punjab Government Proceedings, Nos. 47 to 97, for July 1898, regarding Thánesar Solar Eclipse Fair of 1898.
Circulated, *vide* Nos. 98 to 102, dated 22nd September 1898.

(10) Minutes of the fifth meeting of the North-Western Provinces and Oudh, Sanitary Board, held at Naini Tal, on the 23rd September 1898.
Circulated, *vide* Nos 182 to 186, dated 14th December 1898.

(11) Minutes of the sixth meeting of the North-Western Provinces and Oudh, Sanitary Board, held at Naini Tal, on the 15th October 1898.
Circulated, *vide* Nos 177 to 181, dated 14th December 1898.

57. The reason why no meetings have been held, appears to be that the general feeling among the members is that the Board having no executive power, meets uselessly. The matter of giving executive authority to the Board is now under consideration and will be laid before the Board at its next meeting at Simla.
The reason why no meetings were held.

58. I may say in conclusion that, judging from what I have seen in the chief towns of the Province and from reading the reports of my predecessors, there has been a good deal done to improve the sanitary state of many of these towns in the last few years.
Conclusion.

C. J. BAMBER, Lt.-Col., I.M.S.,

15th May 1899.

Offg. Sanitary Commissioner, Punjab.

ANNUAL FORM

STATEMENT OF BIRTHS AND DEATHS REGISTERED IN EACH DISTRICT OF THE PUNJAB AND THE

Serial No.	Districts	Area in square miles.	Average population per square mile.	POPULATION IN 1901.			Births.	
				Males.	Females.	Total.	Total number.	Birth rate per 1,000 of population.
1		2	3	4	5	6	7	8
Delhi Division.								
1	Muzaffargarh	5,103	150	111,801	331,007	775,805	33,528	43.2
2	Rohtak	1,797	328	313,426	277,020	590,446	27,036	45.8
3	Gurgaon	1,981	337	250,191	218,669	468,860	35,479	56.0
4	Delhi	1,290	102	312,077	293,117	605,194	28,501	44.9
5	Karnal	2,110	280	467,665	393,429	861,094	36,846	42.8
6	Unahilly	2,751	337	135,713	366,136	501,849	29,543	58.7
7	Simla	102	310	22,163	13,081	35,244	768	21.8
Jullundur Division.								
8	Kangra	9,574	79	391,102	365,050	756,152	26,569	35.0
9	Hoshiarpur	2,211	151	510,038	471,006	981,044	39,522	39.1
10	Jullundur	1,473	622	481,630	109,717	591,347	37,561	42.1
11	Ferozepore	1,453	410	354,972	294,283	649,255	27,646	42.6
12	Ferozepore	1,302	200	469,346	392,153	861,499	39,413	45.7
Lahore Division.								
13	Mooltan	6,079	102	339,668	281,191	620,859	24,186	39.0
14	Jhang	5,871	74	233,579	203,242	436,821	23,338	53.4
15	Montgomery	5,754	87	269,569	229,880	499,449	18,867	37.8
16	Lahore	3,678	287	379,116	476,503	855,619	46,800	44.3
17	Amritsar	1,601	619	541,932	449,058	990,990	41,679	45.1
18	Gurdaspur	1,839	498	511,129	429,656	940,785	40,520	43.5
Rawalpindi Division.								
19	Siālkot	1,901	552	584,638	514,074	1,098,712	49,361	44.9
20	Gujrat	2,051	371	400,465	360,338	760,803	28,558	38.1
21	Gujranwala	3,017	229	378,972	311,089	690,061	37,104	53.8
22	Shahpur	4,840	102	258,118	235,417	493,535	19,252	39.0
23	Jhelum	3,995	152	315,011	290,763	605,774	20,858	33.6
24	Rawalpindi	4,844	175	447,549	397,710	845,259	28,861	34.7
Peshawar Division.								
25	Hazara	2,787	170	253,105	223,020	476,125	16,641	35.0
26	Peshawar	2,444	275	361,439	317,744	679,183	20,252	29.8
27	Kohat	2,771	69	96,577	85,910	182,487	6,863	34.9
Derajat Division.								
28	Banna	3,847	96	195,514	174,458	369,972	13,119	35.5
29	Dera Ismail Khan	9,440	51	257,411	225,052	482,463	14,775	30.6
30	Dera Ghazi Khan	5,600	71	218,359	181,501	399,860	12,246	30.6
31	Muzaffargarh	3,422	111	206,908	174,164	381,072	13,377	35.1
Total for the Province		110,463	186	11,037,908	9,516,074	20,553,982	841,869	41.0

NOTE.—Those born dead are not to be included.

No. II.

RECEIPTS AND EXPENDITURE IN EACH DISTRICT, FROM AND ON, CONSERVANCY, DURING THE YEAR 1898.

7			8	9									10			11	12	13
NUMBER OF DEATHS REGISTERED.			Number of deaths of males to every 100 deaths of females.	DEATHS PER 1000 POPULATION									MEAN RATIO OF DEATHS PER 1000 DURING PREVIOUS THREE YEARS.			Net receipt of each district from conservancy.	Net expenditure in each district on conservancy.	Serial No.
Males.	Females.	Total.		Cholera.	Small-pox.	Typhoid.	Dysentery and diarrhoea.	Injuries.	All other causes.	All causes.			Males.	Females.	Total.			
										Males.	Females.	Total.						
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
																Rs.	Rs.	
11,242	10,259	21,501	109.6	..	0.1	20.0	0.7	0.2	6.7	27.1	28.1	27.7	31.1	31.8	31.4	2,199	17,816	1
9,003	8,218	17,221	109.6	..	...	20.7	0.6	0.2	7.7	28.7	29.7	29.2	30.2	29.6	29.9	233	6,266	2
12,867	11,566	24,433	111.2	..	0.3	26.0	1.4	0.1	8.4	30.7	30.3	30.5	32.5	31.8	32.2	532	8,957	3
10,820	10,306	21,126	105.0	...	0.2	19.1	1.2	0.3	12.5	31.0	35.2	33.3	31.2	33.7	35.4	5,375	82,426	4
16,925	15,728	32,653	107.6	...	0.4	25.1	0.7	0.4	11.4	36.2	40.0	37.9	37.3	40.5	38.8	282	12,550	5
12,559	12,086	24,645	103.9	...	1.1	19.6	0.8	0.2	9.0	25.6	33.0	30.6	37.2	39.9	38.4	249	10,759	6
448	312	760	143.6	...	...	9.8	1.9	0.4	9.5	20.2	23.9	21.6	23.7	28.1	25.4	401	31,754	7
11,478	11,388	22,816	101.2	...	...	20.5	0.3	0.4	8.2	29.1	31.1	30.0	31.2	31.9	31.5	...	3,430	8
14,413	13,961	28,374	103.2	...	0.3	15.3	1.1	0.3	11.1	26.7	29.6	28.1	32.2	34.4	33.2	1,285	10,098	9
13,469	13,816	27,285	97.5	...	0.1	13.9	0.8	0.3	15.5	28.0	33.7	30.6	32.0	38.1	34.8	2,661	16,649	10
10,359	10,597	20,956	97.8	...	0.2	19.2	0.6	0.3	11.9	29.2	36.0	32.3	31.4	38.1	34.4	6,010	13,400	11
13,059	12,764	25,823	102.3	...	0.4	18.3	0.7	0.3	10.3	27.8	32.6	30.0	28.0	31.2	29.5	2,110	9,077	12
9,422	8,310	17,732	113.4	..	0.1	19.8	0.7	0.5	7.6	27.7	29.6	28.6	28.8	30.9	29.7	6,600	23,715	13
9,194	8,013	17,207	114.7	...	0.1	20.9	0.8	0.6	17.1	30.4	39.4	30.4	28.7	29.5	29.1	3,280	8,741	14
5,571	5,053	10,624	110.3	...	0.6	10.5	0.4	0.4	9.4	20.7	22.0	21.3	24.8	25.4	25.1	166	3,082	15
17,715	16,240	33,955	109.1	...	0.3	19.4	0.6	0.4	11.5	30.6	34.1	32.2	30.4	32.8	31.5	12,906	74,487	16
16,850	16,753	33,603	100.6	...	0.3	19.2	1.0	0.3	13.1	31.1	37.3	33.9	34.1	39.0	36.3	45,288	72,332	17
15,958	14,835	30,793	107.6	...	0.2	20.4	1.7	0.2	16.2	31.2	34.5	32.7	33.0	34.5	33.7	12,040	14,830	18
18,641	17,806	36,447	104.7	..	0.6	20.9	1.1	0.3	10.3	31.9	34.6	33.2	30.7	30.7	30.7	19,110	17,880	19
10,832	10,223	21,055	106.0	...	..	18.5	0.7	0.2	8.3	27.1	28.4	27.7	23.8	23.3	23.6	2,090	5,312	20
13,235	12,191	25,426	108.6	...	...	27.0	0.3	0.6	9.0	34.9	39.2	36.9	29.6	31.8	30.6	10,509	16,728	21
6,938	6,355	13,288	109.1	...	...	16.8	0.9	0.5	8.7	26.9	27.0	26.9	26.2	25.5	25.9	1,830	7,200	22
9,291	8,840	18,131	105.1	...	0.1	20.5	0.7	0.4	8.3	29.5	30.4	29.9	28.0	28.2	28.1	213	7,020	23
13,508	12,576	26,084	107.4	...	0.1	22.8	0.2	0.5	7.3	30.2	31.6	30.9	32.7	32.5	32.8	1,488	44,122	24
5,200	5,003	10,203	103.9	...	0.3	14.9	0.1	0.3	5.9	20.5	22.4	21.4	23.6	25.6	24.6	444	5,369	25
8,935	6,939	15,874	128.8	...	0.2	19.7	0.2	0.4	2.9	24.7	21.8	23.4	24.1	22.6	23.4	3,240	21,211	26
2,988	2,708	5,696	110.3	...	0.5	24.9	0.2	0.5	5.2	30.9	31.5	31.2	32.0	31.5	31.7	322	5,056	27
6,531	5,661	12,192	115.4	...	...	28.0	0.5	0.4	4.1	33.4	32.5	33.0	29.4	28.8	29.1	2,843	9,580	28
10,176	9,175	19,351	110.9	...	0.2	32.3	1.1	0.4	6.2	39.5	40.8	40.1	31.3	32.3	31.7	1,956	13,856	29
6,189	4,973	11,162	124.5	...	0.3	24.3	0.4	0.4	2.6	28.3	27.4	27.9	25.7	25.7	25.7	1,709	10,113	30
6,207	5,501	11,708	112.8	...	0.1	26.3	0.5	0.5	3.3	30.0	31.6	30.7	28.9	30.4	29.6	1,070	3,722	31
330,018	308,106	638,124	107.1	...	0.2	20.4	0.8	0.4	9.3	29.9	32.4	31.1	30.6	32.2	31.3	1,48,501	5,90,777	

in this or any of the other Statements.

ANNUAL FORM No. III.

DEATHS REGISTERED IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1898

1		3												4	5
Districts		January	February	March	April	May	June	July	August	September	October	November	December	Total deaths registered during the year.	No.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Delhi Division.															
1	Hissar	1,804	1,857	1,811	1,806	1,810	2,007	1,792	1,852	1,850	2,192	2,170	1,878	21,501	1
2	Ranikhet	1,230	907	1,218	1,110	1,129	1,770	1,179	1,498	1,557	1,841	2,113	1,172	17,221	2
3	Gurgaon	1,770	1,246	1,827	1,907	2,210	2,700	2,056	1,957	2,258	2,054	2,195	2,147	24,433	3
4	Delhi	1,005	1,182	27	1,007	1,800	222	1,590	1,709	1,000	1,958	2,015	2,171	21,126	4
5	Karnal	2,705	177	1,825	207	1,888	1,511	5,065	2,600	2,411	3,211	2,950	2,058	32,655	5
6	Meerut	2,122	1,471	1,588	1,805	2,205	2,120	1,981	1,752	2,199	2,516	2,340	2,211	24,615	6
7	Simla	48	46	61	12	78	85	67	82	63	51	69	50	780	7
Jullundur Division.															
8	Kangra	1,761	1,105	1,477	2,158	1,964	2,212	1,171	2,318	2,382	1,999	1,758	2,150	22,516	8
9	Hoshiarpur	2,047	1,713	1,808	2,160	2,227	2,292	1,859	2,217	3,200	3,465	2,724	2,569	28,371	9
10	Jalandhar	1,897	1,619	2,361	1,907	2,312	2,610	2,148	2,076	2,430	2,690	2,550	2,516	27,285	10
11	Ludhiana	1,705	1,319	1,400	1,066	1,905	1,812	1,120	1,752	1,930	2,110	2,021	1,811	20,956	11
12	Ferozepore	2,500	1,816	1,765	1,833	2,130	2,176	1,813	1,977	1,925	2,537	2,590	2,152	25,823	12
Lahore Division.															
13	Mooltan	2,439	1,492	1,213	1,137	1,515	1,309	1,018	996	1,070	1,535	1,988	1,860	17,732	13
14	Jhang	1,951	1,322	1,211	980	1,244	1,473	1,163	1,208	1,131	1,452	2,001	2,065	17,207	14
15	Montgomery	1,333	882	783	700	906	990	717	701	656	850	1,051	1,043	10,624	15
16	Lahore	2,624	1,925	1,866	1,854	2,980	3,087	2,594	2,806	3,001	3,068	3,819	3,711	33,955	16
17	Amritsar	2,352	1,811	1,931	2,086	2,880	3,157	2,627	2,952	3,223	3,771	3,600	3,201	33,608	17
18	Gurdaspur	2,052	1,601	1,655	1,899	2,616	2,302	2,158	2,675	3,479	4,076	3,430	2,856	30,793	18
Rawalpindi Division.															
19	Sialkot	2,334	1,968	1,922	2,087	3,179	2,898	2,191	3,139	4,260	4,754	4,682	3,380	36,447	19
20	Gujrat	1,933	1,128	1,144	1,233	1,570	1,651	1,518	1,820	2,375	2,581	2,209	2,094	21,055	20
21	Gujranwala	1,992	1,196	1,093	1,406	2,521	2,281	1,908	2,295	2,127	2,251	3,023	2,430	25,426	21
22	Shahpur	1,582	1,097	929	890	1,051	1,107	1,005	996	870	1,121	1,244	1,387	13,285	22
23	Jhelum	2,074	1,890	1,143	1,090	1,224	1,360	1,206	1,301	1,554	2,022	1,896	1,862	18,131	23
24	Rawalpindi	3,071	1,930	1,769	1,619	1,804	1,723	1,658	1,783	2,037	2,903	2,969	2,818	26,081	24
Peshawar Division.															
25	Hazara	1,112	867	877	648	714	762	736	795	822	1,026	891	953	10,203	25
26	Peshawar	1,561	1,465	1,240	1,171	1,414	1,370	1,251	1,274	1,091	1,185	1,288	1,561	15,874	26
27	Kohat	899	654	441	368	309	287	327	339	330	526	531	685	5,696	27
Deraajat Division.															
28	Bannu	2,215	1,315	979	989	675	863	720	608	750	817	1,037	1,224	12,192	28
29	Dera Ismail Khan	2,700	1,807	2,329	1,314	1,546	1,756	898	734	1,124	1,389	1,874	1,880	19,351	29
30	Dera Ghazi Khan	1,513	910	808	1,855	799	682	558	850	628	893	850	807	11,162	30
31	Muzaffargarh	1,565	1,037	1,162	1,138	867	653	600	649	657	958	1,295	1,127	11,708	31
Total for the Province		58,358	41,973	43,539	44,578	53,537	55,469	45,334	49,861	55,083	64,467	64,618	61,307	688,124	
Ratio of deaths per 1,000 in each month.		2.84	2.04	2.12	2.17	2.60	2.70	2.21	2.43	2.68	3.14	3.14	2.98	31.05	

ANNUAL FORM No. IV.

DEATHS REGISTERED ACCORDING TO AGE IN THE DISTRICTS OF THE
PUNJAB DURING THE YEAR 1898.

ANNUAL FORM

DEATHS REGISTERED ACCORDING TO AGE IN THE

1	2	3		4		5		6		7	
No.	DISTRICTS.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.		15 YEARS AND UNDER 20 YEARS.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12
Delhi Division.											
1	Hissár	3,261	2,659	2,366	2,411	792	730	352	374	211	210
2	Rohtak	3,604	2,609	1,696	1,657	544	480	258	262	228	218
3	Gurgaon	3,508	2,974	3,074	2,557	816	773	365	313	294	288
4	Delhi	3,272	2,994	2,162	2,110	503	477	315	319	273	273
5	Karnál	4,714	4,409	4,102	3,849	878	842	463	391	384	300
6	Umbálla	3,260	3,439	2,554	2,620	578	529	374	308	297	235
7	Simla	117	71	31	29	9	9	9	7	11	15
Jullundur Division.											
8	Kángra	3,786	3,400	1,036	1,081	419	460	346	334	306	459
9	Hoshiárpur	4,443	4,493	2,887	3,082	608	610	345	313	201	265
10	Jullundur	4,379	5,057	2,972	2,980	545	533	279	295	307	337
11	Ludhiána	3,378	3,864	2,002	2,615	491	432	210	202	163	176
12	Ferozepore	4,255	4,408	3,874	3,860	568	522	336	332	256	279
Lahore Division.											
13	Mooltán	3,183	2,860	1,219	1,227	682	672	58	45	113	100
14	Jhang	2,534	2,748	1,796	1,632	504	431	279	230	138	108
15	Montgomery	1,948	1,820	1,215	1,105	244	243	156	167	81	85
16	Láhpore	5,638	5,379	4,839	4,407	842	743	401	385	293	369
17	Amritsar	5,379	6,056	4,472	4,435	707	673	333	327	233	333
18	Gurdáspur	4,448	3,993	3,816	3,729	721	770	470	510	373	444
Rawalpindi Division.											
19	Siálkot	5,825	5,364	5,569	6,002	849	837	390	379	249	320
20	Gujrát	2,906	2,887	3,209	3,156	514	520	241	232	151	161
21	Gujranwála	4,120	4,150	3,891	3,626	732	626	318	299	182	199
22	Sháhpur	2,192	1,960	1,446	1,471	372	347	153	147	98	108
23	Jhelum	2,348	2,287	1,844	1,866	501	523	256	246	203	191
24	Ráwalpindi	3,290	3,097	2,100	2,222	747	692	466	416	378	340
Peshawar Division.											
25	Hazára	1,615	1,274	689	752	262	293	163	154	161	162
26	Pesháwar	2,174	1,519	1,074	649	535	439	468	376	411	374
27	Kohát	734	519	487	521	142	188	72	58	101	96
Derajat Division.											
28	Bannu	1,941	1,525	1,087	1,044	371	371	172	156	133	119
29	Dera Ismáíl Khan	2,478	2,137	2,309	2,263	551	499	222	159	329	274
30	Dera Gházi Khan	1,905	1,410	1,031	895	396	312	168	138	128	103
31	Muzaffargarh	1,741	1,629	902	846	257	256	161	141	123	102
Total for the Province.		98,076	92,991	72,401	71,083	16,650	15,837	8,604	8,015	6,809	7,043
Ratio per 1,000 living.		215.19	210.09	63.04	68.57	10.46	11.66	6.80	8.48	7.25	9.34

No. IV.

DISTRICTS OF THE PUNJAB DURING THE YEAR 1898.

8		9		10		11		12		13		14
20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		No.
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
13	14	15	16	17	18	19	20	21	22	23	24	
623	673	571	592	644	534	684	500	1,738	1,570	11,242	10,250	1
450	493	461	445	401	441	561	496	1,310	1,117	9,003	8,218	2
828	679	756	751	912	832	845	745	1,475	1,349	12,867	11,563	3
742	787	732	731	759	664	737	648	1,325	1,303	10,820	10,306	4
1,073	1,012	1,097	1,125	1,189	955	1,098	916	1,927	1,929	16,925	15,728	5
856	874	937	879	903	720	898	713	1,902	1,769	12,559	12,086	6
50	47	52	38	53	21	39	23	77	52	448	312	7
817	1,346	843	909	961	789	866	619	2,099	1,851	11,478	11,338	8
743	834	840	831	890	677	902	658	2,554	2,198	14,413	13,931	9
618	567	575	638	680	571	782	595	2,332	2,213	13,469	13,519	10
381	402	403	409	403	419	597	475	1,611	1,543	10,359	10,597	11
447	512	476	471	506	478	658	464	1,683	1,438	13,059	12,764	12
529	527	647	617	674	511	708	452	1,609	1,399	9,422	8,310	13
352	374	462	494	556	371	523	430	1,750	1,255	9,194	8,013	14
194	224	225	240	241	216	304	236	963	717	5,571	5,053	15
794	889	817	738	871	607	846	583	2,374	2,045	17,715	16,240	16
741	885	767	688	787	533	826	580	2,690	2,213	16,850	16,753	17
872	1,024	924	936	1,074	796	1,131	754	2,120	1,879	15,958	14,835	18
672	725	746	693	806	626	880	642	2,655	2,213	18,641	17,806	19
484	417	531	473	540	423	561	451	1,695	1,498	10,832	10,223	20
475	465	513	466	572	438	579	447	1,863	1,481	13,235	12,191	21
256	270	330	328	353	279	413	381	1,315	1,064	6,933	6,355	22
501	508	649	592	631	523	645	554	1,713	1,550	9,291	8,540	23
968	998	1,254	1,209	1,129	923	966	758	2,210	1,921	13,508	12,576	24
325	449	465	551	440	443	320	314	700	611	5,200	5,003	25
462	406	484	458	598	551	894	725	1,835	1,442	8,935	6,939	26
212	235	343	289	263	263	243	207	391	332	2,988	2,708	27
357	343	479	482	534	465	573	384	884	772	6,531	5,661	28
733	746	886	839	795	632	956	833	917	793	10,176	9,175	29
354	410	445	376	428	331	434	276	900	722	6,189	4,973	30
408	457	554	494	521	351	496	384	1,044	841	6,207	5,501	31
317	18,668	19,257	18,817	20,299	16,418	20,965	16,254	49,640	42,980	330,018	308,106	
9'38	10'94	13'06	14'56	19'48	17'98	29'37	26'88	87'65	92'00	29'89	32'36	

ANNUAL FORM No. V.

DEATHS REGISTERED ACCORDING TO CLASSES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1898.

1		2		3					4					5					6	
		POPULATION ACCORDING TO CLASSES OF 1891.					NUMBER OF DEATHS REGISTERED.					RATIO OF DEATHS PER 1,000 OF POPULATION.								
DISTRICTS.		Muhammadans.	Hindus.	Native Christians.	Other classes.	Total.	Muhammadans.	Hindus.	Native Christians.	Other classes.	Total.	Muhammadans.	Hindus.	Native Christians.	Other classes.	Total.	No.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			
Delhi Divn.																				
1	Hissar	199,010	76,757	43	18	775,808	5,184	16,317			21,501	26'05	28'20			27'71	1			
2	Rohtak	85,515	504,905	26		590,446	2,193	15,027	1		17,221	25'64	20'76	38'46		29'17	2			
3	Garhwal	200,061	458,815	56	1	668,863	7,020	16,809	3	1	21,433	36'30	36'63	34'58	1,000'00	36'53	3			
4	Delhi	149,184	485,189	812	59	635,224	1,060	16,248	49	130	21,126	31'50	33'49	60'34	?	33'26	4			
5	Karnal	223,496	637,544	54		861,094	8,223	24,418	2		32,653	36'84	38'90	37'04		37'92	5			
6	Unhalla	234,730	569,519	209	1	804,549	6,963	17,740	2		24,647	29'41	31'13	6'69		30'62	6			
7	Simla	5,527	29,661	50	5	35,246	169	586	5		760	30'38	19'75	100'00		21'56	7			
Jullundur Divn.																				
8	Kangra	39,624	719,922	142	5,770	759,458	1,174	21,612			22,816	29'63	30'31			30'04	8			
9	Hoshiarpur	928,668	682,870	106		1,611,644	8,912	19,120			28,032	27'21	28'15	18'87		28'03	9			
10	Jullundur	405,557	482,770	20		891,347	12,808	14,177			27,287	31'35	29'09			30'61	10			
11	Ludhiana	226,657	421,663	305		648,627	7,236	13,717	3		20,956	31'92	32'53	9'81		32'31	11			
12	Ferozepore	306,490	194,988	12	5	501,499	12,459	13,364			25,823	31'12	28'71			29'97	12			
Lahore Divn.																				
13	Mooltan	500,409	129,420	30		629,859	14,718	2,984			17,732	29'47	24'78			28'56	13			
14	Jhang	344,433	92,371	17		436,821	13,158	4,045	3	1	17,207	38'20	43'79	176'47	?	39'39	14			
15	Montgomery	361,923	137,513	13		499,449	7,960	2,638			10,621	22'01	19'33			21'27	15			
16	Lahore	639,598	114,586	1,251	161	1,055,619	23,959	9,974	22		33,955	37'16	24'08	17'34		32'17	16			
17	Amritsar	452,020	538,006	959	5	990,990	15,598	17,973	32		33,603	34'51	33'41	33'37		33'91	17			
18	Gurdaspur	458,716	479,998	2,069	2	940,785	14,578	16,127	63	25	30,768	31'78	33'60	30'45	?	32'73	18			
Rawalpindi Divn.																				
19	Sialkot	651,155	408,975	9,482		1,069,712	24,297	11,577	132	121	36,447	35'67	29'10	16'03	?	33'17	19			
20	Gujrat	669,347	91,412	64		760,823	18,372	2,679	2	2	21,055	27'45	29'31	31'25	?	27'67	20			
21	Gujranwala	475,494	212,321	2,246		690,061	19,403	6,007	16		25,426	40'81	23'29	7'12		36'85	21			
22	Shahpur	417,661	75,842	27	5	493,535	11,267	2,021			13,288	26'08	26'65			26'92	22			
23	Jhelum	541,192	64,502	68	12	605,774	16,113	2,017	1		18,131	29'77	31'27	14'71		29'93	23			
24	Rawalpindi	751,069	91,137	41	9	842,230	23,367	2,608		109	26,084	30'09	28'62		?	30'86	24			
Peshawar Divn.																				
25	Hazara	454,771	21,330	24		476,125	9,758	414		1	10,203	21'46	20'82		?	21'43	25			
26	Peshawar	648,954	30,190	32	7	679,183	15,396	441	1	36	15,874	23'72	14'61	31'25	?	23'37	26			
27	Kohat	174,281	8,204	2		182,487	5,599	97			5,696	32'13	11'82			31'21	27			
Derajat Divn.																				
28	Bannu	336,186	33,778	8		369,972	11,011	1,181			12,192	32'75	34'96			32'95	28			
29	D. I. Khan	418,594	63,814	43	7	482,463	17,169	2,182			19,351	41'02	34'19			40'11	29			
30	D. G. Khan	347,620	52,211	29		399,860	9,471	1,635		56	11,162	27'25	31'32		?	27'91	30			
31	Muzaffargarh	327,727	53,341	4		381,072	10,176	1,531		1	11,708	31'05	28'70		?	30'72	31			
Total for the Province		11,511,578	9,017,962	18,375	6,067	20,553,982	359,026	278,256	359	483	638,124	31'19	30'86	19'54	*79'61	31'05				

* The high death-rate is due to erroneous classification of population.

ANNUAL FORM No. VI.

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS (RURAL
CIRCLES) AND TOWNS OF THE PUNJAB DURING THE YEAR 1898.

ANNUAL FORM

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS

1	2	3	4	5	6	7	8		
Number	A.—RURAL CIRCLES	Population according to census of 1891.	Cholera.	Small-pox.	Fever.	Dysentery and diarrhoea.	INJURY		
							Suicide.		Wounding and accidents.
							Males.	Females.	
1	2	3	4	5	6	7	8	9	10
Delhi Division.									
1	Hissár	680,212	...	68	14,190	358	3	4	131
2	Rohtak	538,785	...	5	11,526	256	4	4	94
3	Gurgaon	601,449	...	163	16,208	685	12	46	173
4	Delhi	423,113	...	10	8,216	429	3	16	110
5	Karnal	774,720	...	328	20,117	389	7	11	203
6	Umballa	739,137	...	861	14,845	501	6	8	145
7	Simla	24,026	...	...	148	61	...	2	7
Jullundur Division.									
8	Kangra	746,775	...	...	15,365	616	8	10	214
9	Hoshiarpur	940,561	...	187	14,365	847	9	17	241
10	Jullundur	780,065	...	101	10,898	449	4	6	181
11	Ludhiana	565,984	...	151	11,286	202	6	6	163
12	Ferozepore	810,705	...	313	15,026	519	14	8	202
Lahore Division									
13	Mooltan	536,268	...	31	11,101	202	1	2	138
14	Jhang	401,023	...	25	8,708	270	1	1	150
15	Montgomery	480,350	...	258	5,029	166	2	1	132
16	Lahore	846,621	...	306	16,498	287	5	11	208
17	Amritsar	837,832	...	312	15,750	722	10	12	196
18	Gurdaspur	876,381	...	151	17,876	1,477	3	8	156
Rawalpindi Division.									
19	Siálkot	1,029,484	...	558	21,779	1,027	11	3	258
20	Gujrat	721,241	...	18	13,402	398	2	...	181
21	Gujranwála	628,953	...	8	17,472	89	9	2	234
22	Shahpur	443,632	...	7	7,608	295	3	...	163
23	Jhelum	531,123	...	44	11,877	272	1	2	167
24	Rawalpindi	785,870	...	86	17,991	75	2	2	296
Peshawar Division.									
25	Hazára	457,170	...	121	6,747	15	...	1	134
26	Pesháwar	616,119	...	122	12,065	78	...	...	250
27	Kohát	168,145	...	90	4,311	10	...	...	77
Derajat Division.									
28	Bannu	345,124	...	4	9,714	62	...	2	81
29	Dera Ismail Khan	436,063	...	96	14,407	331	1	1	103
30	Dera Gházi Khan	356,398	...	94	8,794	71	...	4	99
31	Muzaffargarh	369,556	...	49	9,737	175	1	2	107
Total of the Rural Circles		18,551,934	...	4,566	383,141	11,347	123	192	5,001

No. VI.

(RURAL CIRCLES) OF THE PUNJAB DURING THE YEAR 1898.

		9	10	11								12
RIES.		All other causes,	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.								Number.
Snake-bite and killed by wild beasts.	Total.			Cholera.	Small-pox.	Fever.	Dysentery and diarrhoea.	Injuries.	All other causes.	From all causes.		
										For the year.	Mean ratio of previous five years.	
11	12	13	14	15	16	17	18	19	20	21	22	23
31	169	3,907	18,692	...	0 10	20 59	0 52	0 25	5 67	27 12	30 43	1
25	127	3,909	15,883	...	0 01	21 39	0 47	0 21	7 37	29 48	29 69	2
20	251	4,952	22,358	...	0 27	27 10	1 16	0 42	6 23	27 17	32 02	3
30	159	5,179	18,993	..	0 02	19 42	1 01	0 38	12 21	33 07	30 11	4
46	267	8,463	29,504	...	0 42	25 97	0 50	0 34	10 92	28 16	29 76	5
20	179	6,544	22,930	...	1 16	20 06	0 68	0 21	8 85	31 02	48 02	6
1	10	184	406	...	...	6 16	2 66	0 42	7 66	16 90	21 72	7
46	278	6,098	22,357	...	...	20 58	0 82	0 37	8 17	29 94	31 43	8
41	308	10,889	26,096	...	0 20	15 27	0 90	0 33	11 06	27 75	32 96	9
10	201	12,190	23,839	...	0 18	13 97	0 58	0 26	15 63	30 56	34 79	10
8	183	6,457	18,279	...	0 27	19 94	0 36	0 32	11 41	32 30	34 20	11
27	251	8,371	24,480	...	0 39	18 53	0 64	0 31	10 33	30 20	29 47	12
84	275	3,647	15,256	...	0 06	20 70	0 38	0 51	6 80	26 45	29 19	13
85	237	6,488	15,728	...	0 06	21 71	0 67	0 59	16 18	39 22	28 30	14
72	207	4,481	10,141	..	0 54	10 47	0 35	0 43	9 33	21 11	24 01	15
96	320	9,327	26,738	...	0 36	19 49	0 34	0 38	11 02	31 58	30 68	16
41	259	10,528	27,571	...	0 37	18 80	0 86	0 31	12 57	32 91	34 84	17
28	195	8,955	28,654	...	0 17	20 40	1 69	0 22	10 22	32 70	33 44	18
51	323	10,255	33,942	...	0 54	21 16	1 00	0 31	9 96	32 97	30 44	19
28	161	5,619	19,593	...	0 02	18 58	0 55	0 22	7 79	27 17	23 19	20
154	399	5,347	23,315	...	0 01	27 78	0 14	0 63	8 50	37 07	30 71	21
69	235	3,750	11,890	...	0 02	17 14	0 66	0 53	8 45	26 80	25 51	22
49	219	4,877	17,289	...	0 08	20 44	0 47	0 38	8 39	29 75	27 36	23
63	365	5,488	24,005	...	0 11	22 89	0 10	0 46	6 98	30 55	32 56	24
7	142	2,655	9,680	...	0 26	14 76	0 03	0 31	5 31	21 17	24 14	25
...	250	1,496	14,011	...	0 20	19 58	0 13	0 41	2 43	22 74	22 45	26
6	83	791	5,285	...	0 54	25 64	0 06	0 49	4 70	31 43	31 75	27
18	101	1,319	11,200	...	0 01	28 15	0 18	0 29	3 82	32 45	28 89	28
32	142	2,512	17,488	...	0 22	33 04	0 76	0 33	5 76	40 10	31 20	29
29	132	651	9,742	...	0 26	24 68	0 20	0 37	1 83	27 38	25 17	30
60	170	1,144	11,275	...	0 13	26 35	0 47	0 46	3 10	30 51	29 09	31
1,277	6,598	166,093	571,685	...	0 25	20 65	0 61	0 36	8 95	30 82	30 55	

ANNUAL FORM

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

1	2	3	4	5	6	7	8		
No.	B.—Towns.	Population according to census of 1891.	Cholera.	Small-pox.	Fever.	Dysentery and diarrhoea.	INJURIES		
							Suicide.		Wounding and accidents.
							Males.	Females.	
1	2	3	4	5	6	7	8	9	10
Hissar District.									
1	Hissar	16,854	...	1	309	31	..	...	3
2	Hansi	15,190	...	...	151	24	..	...	2
3	Bhiwani	25,457	...	4	499	80	..	...	8
4	Susa	16,415	...	...	319	28	...	...	6
5	Fatehabad	2,548	...	...	10	2	...	...	1
Rohtak District.									
6	Rohtak	16,191	...	...	150	31	...	...	...
7	Jhatjar	11,881	...	2	137	16	1	...	4
8	Beri	9,825	...	1	142	11	...	...	2
9	Gohana	7,690	...	...	126	8	...	...	...
10	Bahadurgarh	6,103	...	1	117	4	...	...	1
Gurgaon District.									
11	Rewari	27,934	2	...	247	83	1	...	6
12	Palwal	11,227	...	7	345	24	...	1	4
13	Farakhnagar	5,881	...	...	109	30	...	...	1
14	Ferozpur	6,848	...	2	141	1	...	1	4
15	Sohna	5,900	...	4	145	1	...	1	3
16	Hodal	9,001	...	11	127	31	...	...	1
Delhi District.									
17	Delhi	169,848	...	68	3,528	183	1	...	37
18	Sonepat	12,611	...	2	219	44	...	1	4
19	Balahrath	4,474	...	...	60	46	...	...	2
20	Faridabad	5,929	...	25	138	32	...	...	2
Karnal District.									
21	Karnal	21,530	...	...	431	79	...	...	8
22	Kaithal	15,768	...	9	287	43	...	...	5
23	Panipat	27,547	...	1	416	55	1	...	12
24	Ladwa	4,011	...	...	75	1	...	...	2
25	Shahabad	11,473	...	...	156	23	...	...	1
26	Thanesar	6,111	...	...	98	10	...	...	2
Umballa District.									
27	Umballa	26,856	1	...	294	57	...	...	4
28	Jagadhri	13,029	...	...	236	15	...	...	5
29	Burya	6,809	...	...	130	11	...	...	1
30	Sadhabra	10,445	...	...	158	8	...	...	2
31	Rupar	8,693	...	2	102	20	...	...	1
Simla District.									
32	Simla	13,279	...	...	196	4	...	...	3
Kangra District.									
33	Kangra	5,234	...	...	65	28	...	...	2
34	Dharmasala	2,778	...	...	38	14	...	...	3
35	Nurpur	4,837	...	3	128	12	...	...	3
Hoshiarpur District.									
36	Hoshiarpur	17,546	...	3	246	76	2	...	13
37	Khanpur	3,553	...	...	60	29	...	...	1
38	Hariana	7,066	...	6	74	34	...	...	2
39	Gardhiwala	4,045	...	12	55	15	...	...	1
40	Dasuhal	7,047	...	...	125	12	...	...	3
41	Tanda and Umar	11,632	...	4	224	36	...	...	2
42	Miani	6,849	...	49	125	13	...	...	...
43	Makrihan	3,977	...	...	76	21	...	...	1
44	Una	4,483	...	1	52	16	...	...	2
45	Anandpur	5,100	...	...	79	9	...	1	...
Jullundur District.									
46	Jullundur	50,375	...	2	773	124	...	...	9
47	Alawalpur	4,380	...	...	56	1	...	...	1
48	Kartarpur	10,441	...	...	161	37	1	1	3
49	Bungah	5,010	...	1	29	15	1	...	2
50	Rahon	10,667	...	1	111	35	1	...	4
51	Nawashahr	5,601	...	1	28	24	...	...	8
52	Phillour	6,697	...	...	109	10	...	...	...
53	Nurmahal	8,520	...	4	103	13	...	...	2
54	Nakodar	9,740	...	4	104	12	...	...	4

No. VI.

TOWNS OF THE PUNJAB DURING THE YEAR 1898

RATIO OF DEATHS PER 1,000 OF POPULATION																					
Snake-bite and killed by wild beasts.		All other causes		Total deaths from all causes		Cholera		Small pox		Fever		Dysentery and diarrhoea		Impress		All other causes		For male causes		No	
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
...	3	276	620		0.06	18.33	1.81	0.18	16.28	16.79	46.21	1									
...	2	217	424			11.92	1.58	0.13	14.29	27.91	30.41	2									
...	8	537	1128		0.11	14.06	2.25	0.23	15.13	31.79	41.56	3									
...	1	220	574			19.43	1.71	0.43	13.40	34.97	35.39	4									
...	1	20	63			14.04	0.70	0.35	7.02	22.12	37.99	5									
...	3																				
...	1	3	210	424		11.12	1.91	0.19	12.97	26.19	37.19	6									
...	6	141	302		0.17	11.53	1.35	0.51	11.87	25.42	30.87	7									
...	2	113	269		0.10	14.45	1.12	0.20	11.50	27.38	32.59	8									
...		59	193			16.38	1.04	...	7.67	25.10	32.93	9									
...	1	27	150		0.16	19.17	0.66	0.16	4.42	24.58	31.98	10									
...	7	281	620	0.07		8.81	2.97	0.25	10.06	22.26	31.80	11									
...	5	122	503		0.62	30.73	2.14	0.45	10.87	44.80	17.49	12									
...	1	63	212			18.53	6.63	0.17	10.71	36.05	33.46	13									
...	5	52	233		0.29	20.59	4.82	0.73	7.59	34.02	36.77	14									
...	1	67	228		0.67	24.21	1.67	0.37	10.55	33.06	35.29	15									
...	1	106	279		1.15	13.23	3.54	0.10	11.14	29.66	21.73	16									
...	8																				
...	2	46	2,563	6,388	0.36	13.60	0.06	0.24	13.51	33.65	38.36	17									
...	7	99	371		0.16	17.37	3.49	0.56	7.85	29.42	37.79	18									
...	2	37	145			13.41	10.23	0.45	8.27	32.41	34.60	19									
...	2	32	229		4.22	23.28	5.10	0.34	5.40	35.62	32.65	20									
...	8																				
...	1	8	393	911		20.02	3.67	0.37	18.25	42.31	41.02	21									
...	6	296	641		0.57	18.20	2.73	0.38	18.77	40.65	46.81	22									
...	14	532	1,018		0.04	15.10	2.00	0.51	19.31	36.96	39.21	23									
...	2	42	120			18.70	0.25	0.50	10.47	29.92	46.02	24									
...	1	79	259			13.00	2.00	0.09	6.89	22.57	29.11	25									
...	2	30	140			16.04	1.64	0.33	4.91	22.91	32.86	26									
...	4	373	729	0.04		10.95	2.12	0.15	13.89	27.14	35.78	27									
...	5	114	370			18.11	1.15	0.38	8.75	25.40	42.14	28									
...	1	40	182			19.09	1.62	0.15	5.57	26.73	32.66	29									
...	2	82	250			15.13	0.77	0.19	7.85	23.93	23.46	30									
...	1	59	184		0.23	11.73	2.30	0.12	6.79	21.17	30.07	31									
...	3	151	354			11.76	0.39	0.23	11.37	26.66	25.63	32									
...	2	74	169			12.42	5.35	0.38	11.14	32.29	36.53	33									
...	4	47	103			13.68	5.04	1.41	16.92	37.08	37.51	34									
...	3	41	187		0.62	26.46	2.19	0.62	8.48	38.66	36.81	35									
...	15	269	609		0.17	14.02	4.33	0.85	15.33	31.71	10.59	36									
...	1	53	143			16.89	8.16	0.28	14.92	40.25	43.98	37									
...	3	50	176		0.85	10.47	4.81	0.42	8.35	24.91	37.79	38									
...	1	46	129		2.97	13.60	3.71	0.25	11.37	31.89	27.94	39									
...	3	72	216		0.37	17.74	1.70	0.43	10.22	30.65	36.47	40									
...	3	85	397		4.21	19.26	3.09	0.26	7.31	31.13	31.79	41									
...	2	28	166			18.80	1.96	...	4.21	24.97	24.24	42									
...	2	60	159			19.11	5.29	0.50	15.09	39.98	46.67	43									
...	2	70	141		0.22	11.60	3.57	0.45	15.61	31.45	32.75	44									
...	1	53	142			15.49	1.76	0.20	10.30	27.84	38.67	45									
...	10	700	1,609		0.04	15.34	2.46	0.20	13.90	31.94	34.04	46									
...	1	25	83			12.79	0.23	0.23	5.71	18.95	44.16	47									
...	5	90	293			15.42	3.54	0.48	8.62	28.06	44.08	48									
...	3	185	233		0.20	5.79	2.99	0.60	36.93	46.51	32.69	49									
...	6	172	325		0.09	10.41	3.28	0.56	16.12	30.47	34.14	50									
...	8	119	180		0.18	5.00	4.28	1.43	21.25	32.14	31.92	51									
...	2	94	213			16.28	1.49	...	14.04	31.81	33.51	52									
...	2	165	287		0.47	12.09	1.53	0.23	19.37	33.69	35.14	53									
...	5	98	223		0.41	10.68	1.23	0.51	10.06	22.90	27.29	54									

1	2	3	4	5	6	7	8		
No.	B.--Towns--	Population according to Census of 1901.	Cholera	Small-pox	Fevers.	Dysentery and diarrhoea.	INJURIES.		
							Suicide.		Wounding and accidents.
							Males.	Females.	
1	2	3	4	5	6	7	8	9	10
Ludhiana District.									
55	Ludhiana	16,021	..	..	648	145	..	..	8
56	Jagraon	18,116	..	..	218	30	..	..	11
57	Raikot	9,381	..	..	142	17	..	..	4
58	Khemna	3,877	..	..	60	7	..	..	1
59	Mitchwara	5,340	..	..	97	16	..	..	1
Ferozepore District.									
60	Ferozepore	25,337	..	..	387	81	1	..	4
61	Zira	4,350	..	7	49	4	..	..	1
62	Mukla	1,619	..	..	16	4	..	..	..
63	Dharmkot	6,725	..	5	91	21	..	..	..
64	Muktsar	5,271	..	3	79	1	..	..	1
65	Fazilka	7,963	..	1	93	10	..	..	..
Mooltan District.									
66	Mooltan	61,265	..	1	864	193	1	..	17
67	Kahror	5,898	..	..	81	2	..	..	..
68	Shriabad	6,329	..	..	65	31	..	..	..
69	Jallipor	3,884	..	..	100	3	..	..	..
70	Talamba	2,792	..	..	3	1	..	..	1
71	Dunipur	2,101	..	1	49	..	..	..	..
Jhang District.									
72	Jhang	8,476	..	..	124	10	..	..	1
73	Mazhiana	13,866	..	2	141	39	..	..	6
74	Chinfot	13,476	..	..	150	10	..	..	7
Montgomery District.									
75	Montgomery	5,159	..	2	31	8	..	..	4
76	Kamalia	7,490	..	..	95	12	..	..	1
77	Pakpattan	6,522	..	13	92	11	..	..	..
Lahore District.									
78	Lahore	159,597	..	5	3,072	311	..	1	58
79	Shakrapur	4,024	..	..	91	11	..	..	2
80	Chunian	10,339	..	..	202	20	..	..	1
81	Khudtān	2,921	..	..	45	2	..	..	1
82	Kasur	20,290	..	8	319	20	1	..	13
83	Khemkarn	5,035	..	1	98	12	..	..	..
84	Patti	7,495	..	4	154	3	..	..	2
Amritsar District.									
85	Amritsar	135,401	..	1	2,915	220	2	1	49
86	Majitha	6,417	..	17	82	13	1	..	..
87	Jandiāla	7,732	..	1	202	..	..	..	1
88	Tarn Taran	3,900	..	1	45	13	..	..	1
Gurdaspur District.									
89	Gurdaspur	5,189	..	2	83	11	..	..	2
90	Dinanagar	5,454	..	2	156	2	..	..	..
91	Kalānaur	5,286	..	1	80	16	..	..	1
92	Pathankot	4,749	..	1	131	17	..	..	..
93	Sujānpur	5,796	..	1	92	21	..	..	3
94	Ālphousie	807	..	..	19	4	..	..	..
95	Batalā	27,223	..	30	402	40	..	..	15
96	Srigobindpur	4,859	..	..	122	13	..	1	2
97	Dera Nānak	5,750	..	..	120	6	..	..	1
Sialkot District.									
98	Sialkot	33,965	..	21	671	99	..	..	15
99	Daska	6,493	..	1	111	18	..	..	4
100	Jāmki	4,629	..	1	55	12	..	..	5
101	Kila Sobha Singh	4,520	..	2	69	3	..	..	4
102	Paṣrūr	9,200	..	20	115	17	..	1	..
103	Zafarwāl	5,536	..	9	79	9	..	..	..
104	Nārowāl	4,838	..	3	86	5	..	..	..

[illegible]

1	2	3	4	5	6	7	8	9	10
No.	B—Towns	Population according to Census of 1891.	Cholera.	Small-pox.	Fever.	Dysentery and diarrhoea.	INJURIES.		
							Suicide.		Wounding and accidents.
							Males.	Females.	
1	2	3	4	5	6	7	8	9	10
Gujrat District									
105	Gujrat	17,671	...	...	325	27	1	...	5
106	Jalpur	11,065	...	...	175	61	...	...	6
107	Kanpur	5,474	...	...	84	18	...	...	2
108	Panipat	5,121	...	...	85	5	...	...	2
Gujranwala District									
109	Gujranwala	25,861	...	...	352	15	...	...	5
110	Wazirabad	15,786	...	1	402	78	...	...	9
111	Enamul	7,841	...	...	110	...	1	...	3
112	Khan Dildar Singh	2,843	...	...	61	...	...	...	1
113	Arifpur	4,262	...	...	66	2	...	...	...
114	Rasoolpur	6,502	...	...	119	10	...	...	1
Shahpur District									
115	Biana	17,428	...	1	221	61	...	...	7
116	Shahpur	6,337	...	...	107	9	...	...	1
117	Sahibpur	4,210	...	1	151	17	...	...	1
118	Mandi	7,119	...	...	102	33	...	...	1
119	Kasulda	9,832	...	...	91	37	...	...	2
Jhelum District									
120	Jhelum	9,711	...	...	219	11	...	...	7
121	Pind Dadan Khan	15,055	...	...	301	125	...	...	4
Rawalpindi District									
122	Rawalpindi	38,331	...	...	914	71	...	...	14
123	Mirpur	1,459	...	...	25	2	...	...	...
124	Pindigheb	8,462	...	...	154	6	...	...	2
125	Hazro	9,301	...	...	138	6	...	...	1
126	Attock	2,654	...	...	64	7	...	...	2
Hazara District									
127	Abbottabad	2,242	...	...	16	1	...	...	...
128	Naushahr	3,885	...	...	54	2	...	...	1
129	Baffa	7,437	...	...	206	4	...	...	7
130	Haripur	5,119	...	...	64	9	...	...	...
Peshawar District									
131	Peshawar	63,079	...	3	1,307	81	...	...	24
Kohat District									
132	Kohat	11,347	...	6	225	25	...	...	2
Bannu District									
133	Edwardesabad	6,095	...	...	176	33	...	...	18
134	Isa Khel	7,600	...	...	140	12	1	...	3
135	Kakulbagh	6,702	...	...	186	45	...	...	4
136	Lakki	1,488	...	...	141	19	...	...	3
Dera Ismail Khan District									
137	Dera Ismail Khan	21,573	...	2	662	168	2	...	13
138	Kulachi	9,447	...	5	100	8	...	...	2
139	Blakkar	5,210	...	...	167	7	...	...	1
140	Leiah	7,437	...	2	139	5	...	...	...
141	Karor	2,833	...	2	88	6	...	...	3
Dera Ghazi Khan District									
142	Dera Ghazi Khan	23,899	...	6	426	70	...	1	10
143	Jampur	5,815	...	1	97	9	...	1	5
144	Dajal	6,085	...	...	215	20	...	...	1
145	Rajanpur	4,064	...	...	86	2	...	...	1
146	Kot Mirhan	3,624	...	...	84	...	...	...	...
Muzaffargarh District									
147	Muzaffargarh	3,058	...	...	66	10	...	...	...
148	Khangarh	3,505	...	1	80	11	...	...	1
149	Alipur	2,552	...	...	65	4	...	...	...
150	Khairpur	2,424	...	...	71	1	...	...	1
Total		2,010,390	3	432	35,065	4,400	20	11	627
Total for the Province		20,553,982	3	4,998	418,206	15,747	148	203	5,628

NOTE.—The population of Europeans and Eurasians not being available separately for towns, it could not be excluded from the

No. VI—concluded.

		9	10	11						12		
		RATIO OF DEATHS PER 1,000 OF POPULATION.										
Snake-bite and killed by wild beasts.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Fever.	Dysentery and dia- rrhoea.	Injuries.	All other causes.	From all causes.		No.
										For the year.	Mean of pre- vious five years.	
11	12	13	14	15	16	17	18	19	20	21	22	23
...	6	285	646	..	..	15.79	1.53	0.31	10.80	30.56	31.00	105
...	6	226	498	..	..	15.82	5.51	0.51	20.42	12.80	33.60	106
...	2	67	171	..	..	15.85	3.29	0.37	12.21	31.24	26.81	107
...	2	77	172	..	..	16.22	0.92	0.37	14.20	31.71	25.63	108
...	5	275	647	...	..	13.50	0.58	0.19	10.02	24.60	27.92	109
...	9	286	771	...	0.06	27.47	4.62	0.57	15.12	18.84	34.83	110
1	3	118	233	...	...	18.83	...	0.86	20.20	30.80	30.68	111
...	1	22	84	...	...	21.46	...	0.35	7.71	26.55	24.48	112
...	...	33	101	...	...	15.49	0.17	...	7.71	23.70	19.43	113
1	2	114	275	..	...	22.60	1.52	0.30	17.29	41.72	32.28	114
1	8	225	519	..	0.06	12.65	3.67	0.16	12.91	29.78	30.96	115
...	1	45	162	...	...	16.88	1.42	0.16	7.10	25.53	27.81	116
1	2	116	290	...	0.11	16.72	1.85	0.22	12.60	31.49	31.49	117
1	2	82	219	...	...	14.27	4.82	0.28	11.47	30.63	26.61	118
...	2	78	205	..	...	9.26	2.76	0.20	7.93	21.16	26.60	119
...	7	49	816	...	...	25.61	1.13	0.72	5.05	32.51	26.46	120
1	5	95	526	...	...	19.99	8.80	0.33	6.81	34.94	36.73	121
1	15	453	1,453	...	...	23.84	1.85	0.39	11.82	37.90	38.53	122
...	...	21	48	...	...	17.14	1.37	...	14.39	32.90	32.49	123
1	3	43	206	...	...	18.20	0.71	0.35	5.08	24.31	26.57	124
1	2	108	251	...	...	14.90	0.65	0.22	11.66	27.43	29.48	125
...	2	45	118	...	...	24.11	2.61	0.75	16.96	44.46	44.76	126
...	...	13	30	..	...	7.14	0.45	...	5.80	13.38	17.57	127
...	1	58	115	...	...	13.90	0.51	0.26	14.93	29.60	37.03	128
...	7	30	247	...	...	27.70	0.54	0.94	4.03	33.21	40.63	129
...	...	58	131	...	...	11.81	1.66	...	10.70	24.17	30.03	130
2	26	446	1,863	...	0.05	20.72	1.28	0.41	7.07	29.53	32.68	131
1	3	152	411	...	0.42	15.68	1.74	0.21	10.59	28.05	31.69	132
...	18	97	324	...	...	28.68	5.41	2.95	15.91	53.16	36.95	133
...	4	40	196	...	...	18.42	1.58	0.53	5.26	25.79	21.76	134
1	5	24	260	...	...	27.75	0.71	0.75	3.58	38.79	37.84	135
...	3	49	212	...	...	31.42	4.23	0.67	10.92	47.24	36.94	136
2	17	313	1,102	...	0.09	30.69	7.79	0.79	14.51	53.86	47.97	137
1	3	52	168	...	0.53	10.59	0.85	0.32	5.50	17.78	15.48	138
...	1	51	226	...	...	32.05	1.34	0.19	9.79	43.38	40.88	139
1	1	27	174	...	0.27	18.69	0.67	0.13	3.63	23.40	25.63	140
...	3	34	133	...	0.71	31.06	2.12	1.06	12.00	46.95	42.43	141
...	11	205	718	...	0.25	17.83	2.93	0.46	8.58	30.04	32.43	142
...	6	72	185	...	0.17	16.68	1.55	1.03	12.38	31.81	24.69	143
...	1	78	314	...	...	35.33	3.29	0.10	12.82	51.60	31.26	144
1	2	27	117	...	...	21.16	0.49	0.49	6.64	28.79	25.49	145
1	1	1	86	...	...	23.18	...	0.28	0.28	23.73	29.30	146
...	1	28	105	..	...	21.53	3.27	0.33	9.16	34.34	42.05	147
2	3	25	120	...	0.29	22.82	3.14	0.86	7.13	34.24	40.11	148
...	...	16	85	...	...	25.47	1.57	...	6.27	33.31	42.08	149
...	1	50	123	...	...	29.29	0.41	0.41	20.63	50.74	57.43	150
67	725	25,814	66,439	0.001	0.21	17.44	2.19	0.36	12.84	33.05	35.36	
1,344	7,323	191,847	638,124	...	0.24	20.35	0.77	0.36	9.33	31.05	31.80	

population of towns and rural circles. Their number 8,342 is, however, excluded from the total population of the Province.

APPENDIX TO ANNUAL FORM No. VI.

DEATHS REGISTERED IN THE CANTONMENTS OF THE PUNJAB DURING THE YEAR 1898.

No.	Names of Cantonments	Population according to census of 1891.	Cholera.	Small pox.	Typhoid.	Dysentery and diarrhoea.	Injuries.					All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.	Total births registered during the year.	Ratio of births per 1,000 of population.	No.
							Males.	Females.	Wounding and accidents.	Stuck, shot and killed by wild beasts.	Total.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Dera	2,561	.	.	23	.	.	..	1	1	2	8	33	11	18	6	1
2	Thal	51,116	30	..	756	..	1	..	2	..	..	613	1,408	28	670	13	2
3	Kasur	1,977	.	.	29	.	..	..	..	..	..	23	52	26	60	30	3
4	Dagshahi	2,569	..	.	11	2	..	..	..	..	..	11	24	9	27	11	4
5	Sialkot	2,171	.	.	26	3	..	..	1	..	1	28	61	28	60	28	5
6	Derah	557	.	..	6	2	..	..	..	..	..	8	16	29	15	27	3
7	Dera	3,106	.	..	9	2	..	..	2	..	2	60	73	21	54	16	7
8	Juliana	15,827	..	2	119	1	..	..	1	..	1	65	218	14	122	8	8
9	Ferozpora	23,100	..	.	568	4	..	..	..	..	..	52	621	25	418	17	9
10	Mooltan	10,297	..	..	74	1	..	..	..	..	..	39	114	11	96	9	10
11	Meean Meer	17,257	..	.	117	11	..	..	2	1	3	51	182	11	79	5	11
12	Amritsar	1,365	..	..	19	..	1	..	..	..	1	..	20	15	13	10	12
13	Dalouah	125	..	..	2	..	..	..	1	..	1	7	10	24	9	21	13
14	Bakloh	2,503	..	..	16	1	..	..	..	..	..	7	24	10	39	16	14
15	Sialkot	21,122	..	.	106	1	..	..	..	..	..	79	246	12	257	12	15
16	Jhelum	2,107	..	.	9	1	..	..	..	..	..	1	11	3	19	6	16
17	Rawalpindi	37,570	..	..	220	64	1	..	4	..	5	8	297	8	171	5	17
18	Campbellpora	2,556	.	.	33	1	..	..	..	..	..	7	41	16	51	20	13
19	Murree	309	..	..	9	..	..	..	..	..	..	5	14	45	16	52	19
20	Attock	419	..	..	2	..	..	..	..	..	..	2	4	10	..	..	20
21	Abbottabad	7,750	..	..	10	3	..	..	..	..	..	45	58	7	100	13	21
22	Peshawar	21,112	..	..	93	45	1	..	2	..	3	110	257	12	40	2	22
23	Nowshera	6,855	..	..	48	4	1	..	2	..	3	8	63	9	52	8	23
24	Mardun	3,537	..	..	15	3	..	..	..	..	..	15	33	9	15	4	24
25	Kohat	12,656	..	..	9	25	..	..	1	..	1	41	76	6	9	1	25
26	Edwardesabad	2,267	..	..	6	2	..	..	1	..	1	57	60	29	5	2	26
27	Dera Ismail Khan	3,636	..	..	4	..	..	..	..	..	..	21	25	7	1	..	27
28	Dera Ghazi Khan	3,237	..	..	15	3	..	..	2	..	2	14	34	11	16	5	28
Total		263,926	30	2	2,447	179	5	..	23	2	30	1,391	4,079	15	2,432	9	

ANNUAL FORM No. VII.

DEATHS REGISTERED FROM CHOLERA IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1908.

1		2		3		4		5										6			7			8		9	
No.		DISTRICTS.		CIRCLES OF REGISTRATION.		TOWNS AND VILLAGES.		MONTHS.										TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			MEAN RATIO PER 1,000 FOR PREVIOUS FIVE YEARS.			
				Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	Mean ratio per 1,000 for previous five years.	No.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
Delhi Division.																											
1	Hissar ...	27	...	1,009	..	.	.	.	.	.	.	.	.	.	.	.	.	..	..	..	.	.	..	0.15	1
2	Rohtak	15	...	511	..	.	.	.	.	.	.	.	.	.	.	.	.	...	...	..	.	...	..	0.01	2
3	Gurgaon	21	1	1,201	1	...	...	2	.	.	.	.	.	.	.	.	.	1	1	2	0.002	0.003	0.002	0.12	3
4	Delhi	19	..	813	..	.	.	.	.	.	.	.	.	.	.	.	.	..	...	...	...	..	...	0.01	4
5	Karnal	26	.	1,421	...	.	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	0.02	5
6	Umballa	18	1	1,811	1	.	.	.	.	.	.	.	1	...	.	.	.	1	1	0.002	..	0.001	...	0.13	6
7	Simla	4	.	165	..	.	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	0.07	7
Jullundur Divn.																											
8	Kánra	18	..	778	..	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.15	8
9	Hoshiápur	21	...	2,189	..	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	...	9
10	Jullundur	19	...	1,356	..	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.002	10
11	Ludhiána	15	...	906	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.004	11
12	Ferozepore	25	..	1,645	.	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	..	12
Lahore Division.																											
13	Mooltan	20	...	1,593	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	..	13
14	Jhang	17	..	849	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.01	14
15	Montgomery	21	...	2,626	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.08	15
16	Lahore	29	...	1,672	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.06	16
17	Amritsar	14	...	1,104	..	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.03	17
18	Gurdáspur	25	...	2,401	..	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.01	18
Rawalpindi Divn.																											
19	Sialkot	21	...	2,272	..	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	...	19
20	Gujrát	13	.	1,140	..	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	...	20
21	Gujránwála	17	...	1,241	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.10	21
22	Shahpur	20	...	838	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.03	22
23	Jhelum	16	...	1,077	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.01	23
24	Ráwalpindi	24	...	1,841	.	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.57	24
Peshawar Divn.																											
25	Hazára	18	...	856	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.04	25
26	Pesháwar	21	...	767	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.14	26
27	Kohát	12	...	277	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.03	27
Derajat Division.																											
28	Bannu	19	..	490	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.10	28
29	Dera Ismail Khan	21	..	835	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.01	29
30	Dera Gházi K'han	21	...	760	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.15	30
31	Muzaffargarh	18	...	762	...	.	.	.	.	.	.	.	.	.	.	.	.	...	...	...	...	...	...	0.01	31
Total for the Province		508	2	37,602	2	.	.	2	.	.	.	.	1	...	...	...	...	2	1	3	...	...	...	0.07	

ANNUAL FORM

DEATHS REGISTERED FROM SMALL-POX IN THE DISTRICTS

1	2	3		4		5						
		CITIES & REGISTRATION		TOWNS AND VILLAGES		MONTHS						
		Number in each district.	Number from which deaths from small-pox were reported	Number in each district.	Number from which deaths from small-pox were reported	January.	February.	March.	April.	May.	June.	July.
1	2	3	4	5	6	7	8	9	10	11	12	13
Delhi Division.												
1	Hissar	27	15	1,000	61	4	1	1	9	2	23	7
2	Rouree	15	3	514	5	..	2	1	..	1	1	1
3	Gurgaon	21	12	1,264	43	6	9	9	19	31	46	18
4	Delhi	19	9	813	16	2	1	1	8	30	40	16
5	Karnal	26	18	1,421	65	5	15	26	55	171	22	6
6	Umballa	18	14	1,811	102	8	12	20	57	133	255	190
7	Simla	4	..	165	..	..	..	..	..	..	..	..
Jullundur Division.												
8	Kangra	18	1	778	1	..	..	..	..	..	3	..
9	Hoshiarpur ..	21	..	2,180	102	21	30	35	58	58	42	22
10	Jullundur	19	8	1,336	67	..	5	10	15	14	15	11
11	Ludhiana	15	10	906	90	6	11	12	19	34	27	15
12	Ferozepore ..	27	..	1,615	241	16	15	21	28	48	68	41
Lahore Division.												
13	Mooltan	20	11	1,543	15	6	2	1	2	6	4	1
14	Jhang	17	13	849	15	1	2	6	1	3	3	2
15	Montgomery ..	21	20	2,626	141	14	16	10	17	40	46	39
16	Lahore	23	24	1,672	143	35	26	25	22	41	39	19
17	Amritsar	14	14	1,104	241	20	18	16	34	44	76	51
18	Gurdaspur	25	19	2,401	71	17	18	19	24	33	31	21
Rawalpindi Division.												
19	Sialkot	21	21	2,272	213	45	78	49	48	111	110	66
20	Gujrat	13	4	1,440	11	1	1	1	1	4	8	2
21	Gujranwala ..	17	3	1,241	5	1	1	..	..	1	..	1
22	Shahpur	20	7	838	7	2	..	1	2	2	1	1
23	Jhelum	16	9	1,077	17	11	14	6	11	1	..	1
24	Rawalpindi ..	24	10	1,841	59	16	12	18	14	13	4	3
Peshawar Division.												
25	Hazara	18	9	886	84	19	27	14	9	15	20	13
26	Peshawar	21	16	767	79	32	23	19	6	..	3	2
27	Kohat	12	9	277	23	7	7	5	6	9	6	8
Derajat Division.												
28	Bannu	19	1	490	1	..	..	1	..	..	3	..
29	Dera Ismail Khan...	21	16	835	29	2	4	22	21	15	9	5
30	Dera Ghazi Khan...	21	16	760	45	8	11	10	17	20	24	9
31	Muzaffargarh ..	18	10	762	15	9	4	9	6	8	3	3
Total for the Province ..		598	371	37,602	2,306	323	363	367	479	886	927	604

No. VIII.

OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1898.

					6			7		8			9	10
					TOTAL.			NUMBER OF DEATHS AMONG CHILDREN.		TOTAL RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	No.
August.	September.	October.	November.	December.	Males.	Females.	Total.	Under one year.	Over one and under 10 years.	Males.	Females.	Total.		
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
10	2	3	2	6	42	31	73	7	56	0.10	0.09	0.09	1.26	1
...	2	..	...	1	4	5	9	3	4	0.01	0.02	0.02	0.17	2
13	6	...	...	..	97	89	186	44	137	0.28	0.28	0.28	1.40	3
2	2	1	...	2	55	50	105	17	80	0.16	0.17	0.17	0.55	4
6	10	9	13	...	183	155	338	95	240	0.39	0.39	0.39	1.02	5
30	18	24	8	18	451	412	863	169	627	1.03	1.13	1.07	1.48	6
...	...	...	...	...	...	...	...	...	...	...	...	...	0.15	7
...	...	..	...	...	2	1	3	...	...	0.01	0.002	0.003	0.02	8
9	7	1	4	7	117	145	262	73	186	0.22	0.31	0.26	0.25	9
3	1	5	11	18	58	56	114	30	61	0.12	0.14	0.13	0.41	10
8	7	4	4	4	86	65	151	20	120	0.24	0.22	0.23	1.04	11
34	19	19	12	13	190	139	329	51	233	0.40	0.35	0.38	1.52	12
3	6	...	...	2	13	20	33	2	19	0.04	0.07	0.05	0.44	13
...	3	2	...	4	15	12	27	16	9	0.06	0.06	0.06	0.89	14
26	13	10	20	22	133	140	273	52	197	0.49	0.61	0.55	1.25	15
20	32	23	21	18	171	153	324	62	231	0.30	0.32	0.31	1.03	16
28	23	12	9	1	186	146	332	63	240	0.34	0.33	0.34	0.49	17
17	6	2	...	8	80	111	191	42	127	0.16	0.26	0.20	0.19	18
33	20	20	19	16	328	287	615	159	400	0.56	0.56	0.56	0.46	19
...	...	...	...	...	13	5	18	4	11	0.08	0.01	0.02	0.67	20
...	...	...	2	3	6	3	9	5	3	0.02	0.01	0.01	0.45	21
...	...	...	...	...	5	4	9	3	5	0.02	0.02	0.02	1.17	22
...	..	...	...	...	28	16	44	21	18	0.09	0.06	0.07	0.69	23
...	1	2	3	...	45	41	86	34	35	0.10	0.10	0.10	0.73	24
4	...	...	...	...	55	66	121	22	86	0.22	0.30	0.25	1.08	25
4	2	9	7	18	75	50	125	62	62	0.21	0.16	0.18	1.39	26
1	3	12	12	20	44	52	96	17	74	0.46	0.61	0.53	0.84	27
...	...	...	...	...	2	2	4	...	3	0.01	0.01	0.01	1.56	28
10	2	4	1	12	63	44	107	20	82	0.24	0.20	0.22	0.81	29
2	...	...	...	...	47	54	101	21	60	0.22	0.30	0.25	0.27	30
3	1	4	...	...	22	28	50	10	25	0.11	0.16	0.13	0.44	31
326	216	166	148	193	2,616	2,382	4,998	1,130	3,381	0.24	0.25	0.24	0.78	

ANNUAL FORM

DEATHS REGISTERED FROM FEVERS IN THE DISTRICTS

1	2	3		4		5					
No	DISTRICT	CIRCLES OF REGISTRATION.		TOWNS AND VILLAGES.		MONTHS					
		Number in each district	Number from which deaths from fever were reported	Number in each district	Number from which deaths from fever were reported.	January	February	March	April	May	June
1	2	3	4	5	6	7	8	9	10	11	12
Delhi Division											
1	H	27	27	1,000	1,000	1,172	957	1,079	1,100	1,268	1,502
2	R	15	15	511	500	516	613	938	1,019	1,025	1,380
3	G	21	21	1,251	1,264	1,227	908	1,328	1,470	1,635	1,840
4	D	19	19	513	685	948	615	834	998	1,111	1,321
5	K	26	26	1,421	1,263	1,959	1,304	1,331	1,428	2,222	2,217
6	U	18	18	1,811	1,612	1,352	913	1,030	1,228	1,491	1,566
7	S	4	4	163	132	21	19	38	21	37	31
Jullundur Division											
8	K	18	18	778	722	1,100	888	951	1,504	1,414	1,509
9	H	21	21	2,189	1,663	1,001	770	777	943	1,184	1,285
10	J	19	19	1,356	1,103	959	654	632	832	1,167	1,120
11	L	15	15	906	847	908	717	725	955	1,160	1,196
12	F	25	25	1,645	1,170	1,616	1,050	988	1,082	1,542	1,394
Lahore Division											
13	M	20	20	1,593	1,312	1,835	1,043	916	788	1,150	980
14	J	17	17	819	832	1,447	681	171	123	171	976
15	M	21	21	2,626	935	759	475	372	326	467	506
16	L	29	29	1,672	1,657	1,599	1,081	1,014	1,082	1,740	1,929
17	A	14	14	1,104	1,039	1,128	802	930	1,002	1,636	1,885
18	G	25	25	2,401	2,050	1,207	922	966	1,174	1,652	1,568
Rawalpindi Division.											
19	S	21	21	2,272	1,991	1,336	1,113	1,107	1,204	1,886	1,737
20	G	13	13	1,440	1,257	1,119	722	659	727	971	1,074
21	G	17	17	1,241	1,240	1,457	1,090	1,153	1,024	1,895	1,735
22	S	20	20	838	835	1,232	711	609	558	696	753
23	J	16	16	1,077	987	1,514	881	737	682	795	883
24	R	24	21	1,841	1,681	2,400	1,133	1,251	1,153	1,316	1,288
Peshawar Division											
25	H	18	18	886	611	840	616	635	440	452	506
26	P	21	21	767	723	1,296	1,260	1,066	975	1,227	1,158
27	K	12	12	277	277	767	540	369	290	221	219
Derajat Division.											
28	B	19	19	490	488	1,965	1,140	843	854	507	752
29	D	21	21	835	805	2,386	1,522	1,956	1,053	1,256	1,458
30	D	21	21	760	465	1,393	785	734	1,674	688	549
31	M	18	18	762	599	1,325	885	984	1,009	757	558
TOTAL FOR THE PROVINCE		598	598	37,602	31,853	40,567	27,263	27,173	28,808	34,822	36,884

No. IX.

OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1898.

						6			7			8	9
						TOTAL			TOTAL RATIO OF DEATHS PER 1,000 OF POPULATION			Mean ratio per 1,000 for the year five years	No.
July	August	September	October	November	December	Males	Females	Total	Males	Females	Total		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
1,267	1,238	1,262	1,577	1,490	1,296	7,914	7,621	15,535	21.18	21.12	20.65	22.52	1
811	974	884	1,201	1,527	950	6,531	5,847	12,378	20.23	21.20	20.71	20.60	2
1,914	1,265	1,425	1,256	1,793	1,058	7,652	8,000	15,652	23.85	20.23	22.03	20.81	3
916	886	941	1,151	1,197	1,243	5,935	6,106	12,041	17.13	21.1	19.1	20.14	4
1,839	1,651	1,576	2,208	1,938	1,574	11,012	10,500	21,512	23.55	26.80	25.00	25.82	5
1,207	1,032	1,316	1,666	1,491	1,350	8,059	7,767	15,825	18.37	21.65	19.50	25.71	6
26	45	35	28	21	19	190	151	341	8.57	11.77	9.76	10.61	7
761	1,610	1,774	1,163	1,120	1,311	7,830	7,757	15,587	19.88	21.25	20.51	21.67	8
1,010	1,214	2,022	2,173	1,637	1,153	7,651	7,870	15,521	14.17	16.60	15.30	22.00	9
943	1,033	1,000	1,957	1,222	1,097	6,097	6,335	12,432	12.53	15.15	13.85	23.31	10
881	1,100	1,154	1,327	1,213	1,025	6,088	6,363	12,451	17.18	21.62	19.20	20.16	11
1,075	1,101	1,081	1,557	1,038	1,567	7,878	7,803	15,681	16.79	20.05	18.27	17.00	12
729	682	600	1,008	1,386	1,200	6,515	5,718	12,233	19.19	20.14	19.76	19.15	13
770	777	665	826	1,276	1,246	4,876	1,256	6,132	20.88	20.91	20.91	15.97	14
316	287	300	390	511	529	2,730	2,517	5,247	10.13	10.95	10.51	12.50	15
1,518	1,579	1,720	2,517	2,481	2,419	10,583	9,896	20,479	18.27	20.77	19.40	19.13	16
1,455	1,721	1,941	2,261	2,205	1,572	9,450	9,555	19,004	17.15	21.23	19.17	21.42	17
1,362	1,500	2,070	2,633	2,230	1,768	9,760	9,351	19,111	19.09	21.83	20.35	22.33	18
1,490	1,926	2,725	3,303	2,321	2,278	11,498	11,467	22,965	19.07	22.31	20.90	19.41	19
974	1,187	1,605	1,847	1,676	1,513	7,100	6,065	13,164	17.75	19.33	18.50	14.84	20
1,362	1,610	1,505	1,680	2,272	1,826	9,630	8,073	17,703	25.43	28.84	26.07	21.19	21
618	531	448	501	701	827	4,159	3,119	7,278	16.11	17.50	16.77	11.37	22
815	862	1,037	1,472	1,403	1,323	6,241	6,186	12,427	19.81	21.28	20.51	16.76	23
1,171	1,237	1,459	2,165	2,301	2,112	9,863	9,423	19,286	22.01	23.69	22.82	22.35	24
453	511	583	744	633	674	3,506	3,579	7,085	13.86	16.05	14.88	17.84	25
1,013	1,065	922	1,015	1,078	1,207	7,472	5,900	13,372	20.67	18.57	19.69	18.25	26
264	254	257	430	408	517	2,312	2,224	4,536	23.94	25.89	24.86	24.95	27
603	490	611	661	835	1,036	5,463	4,894	10,357	27.91	28.05	27.99	22.30	28
715	556	805	1,027	1,406	1,423	8,054	7,509	15,563	31.29	33.37	32.26	23.23	29
447	706	513	775	745	693	5,393	4,309	9,702	21.70	23.74	24.26	22.98	30
499	516	531	832	1,147	976	5,265	4,754	10,019	25.45	27.30	26.29	25.16	31
28,692	31,221	35,070	43,075	43,824	40,807	213,917	204,289	418,206	19.38	21.47	20.35	20.56	

ANNUAL FORM

DEATHS REGISTERED FROM DYSENTERY AND DIARRHŒA IN THE DISTRICTS

1 No.	2 DISTRICTS.	3 CIRCLES OF REGISTRATION.		4 TOWNS AND VILLAGES.		5 MONTHS					
		Number in each dis- trict.	Number from which deaths from dysen- tery and diarrhœa were reported.	Number in each dis- trict.	Number from which deaths from dysen- tery and diarrhœa were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
	Delhi Division.										
1	Hissâr	27	27	1,009	150	52	27	16	29	34	47
2	Rohtak	15	15	514	295	24	15	13	8	16	16
3	Gurgâon	21	21	1,264	232	62	35	33	49	60	62
4	Delhi	10	19	813	240	58	24	34	43	52	83
5	Karnâl	26	26	1,421	145	33	23	38	43	54	55
6	Umballa	18	18	1,811	280	30	28	30	27	38	53
7	Simla	4	4	165	18	4	2	2	1	4	9
	Jullundur Division.										
8	Kángra	18	18	778	388	56	39	40	42	79	99
9	Hoshiárpur	24	24	2,180	354	30	49	52	108	98	64
10	Jullundur	19	19	1,356	142	32	13	35	64	62	51
11	Ludhiána	15	15	906	116	45	20	20	37	40	22
12	Ferozepore	25	25	1,645	150	15	46	39	48	61	42
	Lahore Division.										
13	Mooltan	20	20	1,593	37	53	23	24	28	30	20
14	Jhang	17	17	849	95	41	21	13	17	29	30
15	Montgomery	21	21	2,626	119	22	14	11	15	11	22
16	Lahore	20	28	1,672	144	31	26	23	34	46	36
17	Amritsar	14	13	1,104	255	56	36	39	42	68	66
18	Guriláspur	25	25	2,401	559	44	31	30	63	114	66
	Rawalpindi Division.										
19	Siálkot	21	21	2,272	435	15	31	33	47	107	74
20	Gujrát	13	13	1,440	215	13	14	12	24	23	15
21	Gujránwála	17	15	1,241	70	14	1	3	8	20	9
22	Shahpur	20	20	838	150	41	32	19	26	30	36
23	Jhelum	16	16	1,077	115	33	23	15	19	31	44
24	Ráwalpindi	24	21	1,841	38	20	8	6	5	11	12
	Peshawar Division.										
25	Hazára	18	11	886	16	...	5	2	1	...	3
26	Pesháwar	21	17	767	109	13	13	24	16	17	10
27	Kohát	12	5	277	9	7	1	1	3	2	2
	Derajat Division.										
28	Bannu	19	15	490	55	35	12	11	13	15	9
29	Dera Ismail Khan	21	21	835	135	66	38	43	22	46	32
30	Dera Gházi Khan	21	17	760	65	35	21	6	9	14	8
31	Muzaffargarh	18	19	762	69	51	23	26	5	5	8
	TOTAL FOR THE PROVINCE ...	598	565	37,602	5,200	1,108	694	698	896	1,217	1,105

No. X.

OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1895.

						6			7			8	9
						TOTAL.			RATE OF DEATHS PER 1,000 OF POPULATION			Mean ratio per 1,000 for previous five years.	No.
July	August	September	October	November	December	Males	Females	Total	Males	Females	Total		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
51	77	58	40	50	73	255	128	523	0.71	0.66	0.67	0.91	1
17	30	27	30	72	40	171	135	320	0.55	0.50	0.55	0.64	2
80	80	108	121	88	122	498	420	1,178	1.42	1.62	1.57	1.51	3
62	60	78	75	71	88	424	414	744	1.24	1.06	1.10	1.53	4
17	60	56	53	76	62	350	25	600	0.75	0.64	0.70	1.10	5
50	52	30	74	68	55	379	250	612	0.80	0.71	0.76	1.24	6
10	11	5	4	8	2	35	0	18	1.58	2.52	1.93	2.20	7
54	50	65	48	40	43	358	312	670	0.91	0.85	0.88	1.02	8
61	108	151	180	145	50	580	528	1,108	1.07	1.12	1.10	0.80	9
40	70	67	112	87	45	367	356	720	0.76	0.86	0.81	0.76	10
24	35	55	50	38	25	226	191	417	0.64	0.65	0.64	0.80	11
43	78	64	68	56	50	356	284	640	0.76	0.72	0.74	0.66	12
25	20	47	57	42	52	237	195	432	0.70	0.60	0.70	0.92	13
17	34	32	23	27	35	198	131	320	0.85	0.64	0.75	0.62	14
14	12	13	32	17	14	118	79	197	0.44	0.34	0.39	0.43	15
45	61	87	114	90	73	410	256	666	0.71	0.54	0.63	0.56	16
32	83	140	162	120	94	576	302	968	1.06	0.87	0.98	1.24	17
74	108	332	287	208	100	863	744	1,607	1.69	1.73	1.71	1.14	18
62	98	259	226	123	84	892	498	1,190	1.18	0.67	1.08	1.02	19
15	43	120	121	75	25	289	220	500	0.72	0.61	0.67	0.40	20
10	23	32	21	24	21	115	74	180	0.30	0.21	0.27	0.26	21
30	54	40	51	46	40	246	209	455	0.95	0.80	0.92	0.68	22
34	43	36	66	40	24	214	194	408	0.68	0.67	0.67	0.43	23
17	18	22	24	14	10	114	53	167	0.25	0.13	0.20	0.17	24
4	1	2	4	7	2	16	15	31	0.06	0.07	0.07	0.11	25
7	13	12	12	13	9	113	46	159	0.31	0.14	0.23	0.21	26
1	4	4	5	4	1	20	15	35	0.21	0.17	0.19	0.17	27
8	15	13	14	15	11	96	75	171	0.49	0.43	0.46	0.37	28
30	42	55	55	52	44	285	240	525	1.11	1.07	1.09	0.64	29
9	20	13	17	14	6	94	78	172	0.43	0.43	0.43	0.25	30
12	9	5	19	22	16	118	83	201	0.57	0.48	0.53	0.48	31
1,054	1,536	2,184	2,192	1,771	1,292	8,827	6,920	15,747	0.80	0.73	0.77	0.77	

STATEMENT SHOWING THE CHIEF SANITARY DEFECTS IN THE MUNICIPALITIES OF THE PUNJAB DURING THE YEAR 1898.

No.	1	2	3	4	5	6	7	8
No.	District.	Name of Municipality.	Population according to census of 1901.	Total deaths per 1,000 of population.	Water supply.	Drainage.	Remedial measures adopted.	No.
1		Hissar	16,854	36.79	The supply is obtained from wells. The water of the wells in the town is very hard, but in those outside it is good.	There is no proper system of drainage. The northern and western portions of the town are on high ground and are drained by <i>pukka</i> drains, but there is not sufficient water and the grades are too flat to allow of proper flushing, consequently they generally contain stagnant matter which is periodically removed. The eastern and southern portions of the town have very few drains or paved streets. There are several large depressions in the town which become stagnant pools after rains. There are also large depressions outside the town which are generally swamps and affect the health of the town. The sewage from some of the houses is collected in small masonry tanks, but the greater part finds its way into the street drains which, as remarked before, are not properly drained.	All the depressions inside or outside the town have been filled in; a scheme for the drainage of the low piece of land to the east of the town from Mori Gate, including the Ghosi and Gujar Mohalla, is under consideration of the Committee. Rs. 313 and Rs. 2,947 were spent respectively on drainage and water-supply.	1
2		Hansi	15,190	27.91	Water is obtained from wells. Those in the town are slightly brackish and contaminated by sewage; those outside have much better water. A branch of the Western Jumna Canal runs partly round the town and its water is used for washing clothes and bathing.	The drainage is inefficient. Part of the town has <i>pukka</i> drains and paved streets, but there are no proper arrangements for bathing them properly flushed. The town is surrounded by swamps caused in part by the branch of the canal being on a higher level than the surrounding country. Into these swamps the drainage and part of the sewage of the town find their way. This renders the town very subject to malarial fever. The sewage is also allowed to sink into the ground round the houses and into the streets thus breeding disease.	Drainage scheme is still under consideration	2
3	Hissar.	Bhiwani	35,487	31.79	The water-supply is most defective. There are two wells outside the town, the water of which is good, but all the wells in the city are either brackish or contaminated, and this polluted water is chiefly used, the charge for drawing water from the two good wells outside the town being very high. A good water-supply is a pressing necessity.	The drainage and sewage systems are very bad. The town lies in a hollow and the drainage, charged with sewage from the houses, collects in tanks, mostly in the town itself. A drainage scheme is urgently required and should be taken in hand when the canal bringing good water to the tanks is constructed, as in that case, all drainage must be shut off from the tanks.	The work of construction of water-works, it is hoped, will be commenced with effect from the 1st April 1899. The pipes, &c., will be received here during the month of February 1899. Rs. 2,215 and Rs. 225 were spent on water-supply and repairs to latrines respectively.	3
4		Sirsa	16,415	34.97	..... A good water-supply is a pressing necessity.	The drains are most inefficient. Three or four of the principal streets are paved and have <i>pukka</i> side drains, but there are no flushing arrangements and not even outlets, the main drain into which their drainage is supposed to flow being at a higher level than the street drains themselves.	Some drinking wells have been cleared and three wells have been provided with parapets. Rs. 785 were spent on pavements.	4

5	Fatehabad	...	2,848	22-12	The drainage finds its way into tanks inside the town of Sirsa and the city drain outside. The smell from these is most offensive, and the streets in the neighbourhood of the tanks are periodically flooded with foul water. The sewage is allowed to accumulate in the streets and on the ground about the houses.	5	The Fatehabad Municipality has been abolished and the town constituted as notified area. The revenue is insufficient to maintain its establishment.
6	Rohtak	...	16,191	26-10	Water generally saltish or brackish	6	Several lanes and streets have been paved. <i>Pakhadis</i> have been entertained to carry away waste water from cesspools attached to private houses.
7	Jhajjar	...	11,881	25-42	Water for drinking purposes is obtained from wells outside the town, but these are contaminated by town drainage, and one considered the best, is near a graveyard. The wells inside the city are brackish. Tanks outside the town are used for bathing and washing.	7	Several lanes and streets have been paved and the latrines have been repaired.	
8	Beri	...	9,825	27-38	Water is obtained from wells outside the town. These wells are suspicious, as the drainage of the town finds its way into them. The wells inside the town are brackish and are used for bathing purposes, &c.	8	Several lanes and streets have been paved	
9	Gohana	...	7,600	25-10	Water generally saltish or brackish	9	The Municipality has constructed pavements around the drinking wells and the tanks attached to them in order to carry waste water to some distance.
10	Bahadurgarh	...	6,103	24-58	Ditto	10	Rs. 1,551 and Rs. 107 were spent on pavements and water-supply respectively.
11	Rewari	...	27,984	22-20	The wells inside the town are <i>pakka</i> , but contain water impregnated with lime and salts. The wells containing drinking water outside the town are not protected. Water stagnates in the pond adjoining and there are other obvious sources of contamination.	11	Rs. 1,551 and Rs. 107 were spent on pavements and water-supply respectively.	
12	Palwal	...	11,227	44-80	The wells are <i>pakka</i> and contain water of a fair quality; in some, however, there is a distinct smell of sulphuretted hydrogen probably owing to their not being cleaned thoroughly and periodically, and also to their being situated in localities where water stagnates and gets polluted.	12	Rs. 1,551 and Rs. 107 were spent on pavements and water-supply respectively.	
13	Farukhnagar	...	5,581	36-05	Drinking water is obtained from wells, which are fairly well protected, but they are not as clean as they should be.	13	Rs. 401 were spent on drainage	

GURGAON.

STATEMENT No. XI—continued.

1	2	3	4	5	6	7	8
	District.	Name of Municipality.	Population according to census of 1891.	Total death-rates per 1,000 of population.	Chief Sanitary Defects.		
No.					Water-supply.	Damage.	Remedial measures adopted.
14	UDHWA—concl.	Ferozpur ...	6,849	34.02	Water supply is obtained from wells, and not protected from pollution.	House sewers is to a certain extent covered by the conservancy establishment, but a great deal of it comes into the ground in the immediate vicinity of the houses.	...
15		Sohna ...	5,090	38.06	Drinking water is obtained from wells near the upper end of the town. There are wells near some hot springs, but the water is brackish and warm.	The main bazar is metalled with <i>lakes</i> , the smaller streets are paved with stone, and the lanes are unpaved. The streets and lanes are sometimes flooded, and the surrounding country rendered muddy by the mudre obstruction caused by a bridge to the flow of water in the adjacent stream.	Rs. 289 were spent on water-supply ...
16		Hodal ...	9,601	29.06	Drinking water is obtained from wells, both inside and outside the town. The water in some of these is brackish.	The principal streets are metalled and have side drains. Almost all the lanes are unpaved and defective. The arrangement for the removal of sewage is defective.	Rs. 915 were spent on ...
17		Delhi ...	189,648	33.08	The Delhi Water-works Scheme was completed in 1893.	Many of the old underground drains, which become blocked frequently and at all times a frightful nuisance, still exist. All these require to be replaced by surface drains. There are no drains at all in Sahzi Mandi, Sadai Bazar and Paldi, and districts, and drains are urgently required.	An estimate amounting to Rs. 6,00,000 has been prepared by the Public Works Department for open drains to replace the old underground drains inside the city walls. Out of this sum Rs. 23,000 has been spent by the Public Works Department, and there is no more money now to spend. To provide funds for repayment of principal and interest of the loan of 6 lakhs the Committee has sent up proposals for (1) fixing carts kept within municipal limits, (2) levying toll on carts coming into municipal limits, but the matter is still pending with Government. When these proposals are sanctioned, further steps will be taken about the loan required. About the suburban wards no project for drains are yet been made, it is probable we will require another 6 lakhs at least for drains in these wards. At present some of the sewage water in the suburban wards is collected in cesspools attached to each house and carried away in urine carts, but the whole is not removed for the want of sufficient carts. A requisition for more carts has been made to the Municipal Committee. Steps are being taken whenever reports are made to close <i>obars</i> , or to connect them with the drains.

DELHI.

18	Sonepat ..	12,611	29-42	Sufficient and is obtained from wells outside the town for drinking and cooking purposes. The water from wells in the town is brackish and is used for other domestic purposes.	<p>A good drainage system is required. Night-soil is removed by sweepers to fields outside the town, where it is collected in heaps and sold annually. Only the main bazar and a few lanes have <i>pallas</i> drains, but these are so badly constructed as to be almost useless.</p> <p>There is no system of house drainage. Most of the lanes are unpaved, and water used for domestic purposes is thrown into them, and stagnates there. Children use the lanes as latrines, and the town is in an unsanitary condition. The drains are not of proper section, nor laid to level, consequently the contaminated water which finds its way into them collects and stagnates.</p> <p>There is no drainage system, and one is required. The streets are unpaved and there are no side-drains. It is stated that the Agra Canal has obstructed the surface drainage of the country, and the land about the town becomes a low-lying and consequently unhealthy in the rains.</p>	<p>An estimate for the extension of the Delhi water-works has been sanctioned, but no funds have been provided as yet. Rs. 47,553 were spent in connection with the Delhi drainage works.</p> <p>Rs. 3,221, Rs. 39,262 and Rs. 181 were spent on drainage, water-supply and repairs to latrines, respectively.</p> <p>The Sonepat Municipal Committee have paved many streets within the last two years, and also built surface drains, but there is still a want of complete drainage.</p> <p>Rs. 296 were spent on pavement.</p>	18
19	Balabgarh ..	4,471	32-41	The water supply is obtained from wells, but it is not good. Good canal water is to be had two miles from the town.	<p>There is no drainage system, and one is required. The streets are unpaved and there are no side-drains. It is stated that the Agra Canal has obstructed the surface drainage of the country, and the land about the town becomes a low-lying and consequently unhealthy in the rains.</p>	<p>An estimate for Rs. 2,220 was prepared for constructing surface drains in the interior of the town of Balabgarh and sent to the Executive Engineer, who returned it suggesting that a complete scheme of drainage should be prepared for the town.</p> <p>Rs. 105 were spent on drainage.</p> <p>Rs. 229 were spent on drainage.</p>	19
20	Faridabad ..	5,929	85-92	Water brackish in many wells ..	<p>Some <i>pallas</i> drains exist, but more are required, and should be on a better slope to ensure their being self-cleansing. Many of the lanes are unpaved, and suitable places for depositing night-soil should be selected, as at present it is thrown in heaps just outside the town and is dangerous to health.</p>	<p>Rs. 165 were spent on drainage.</p> <p>Rs. 229 were spent on drainage.</p>	20
21	Karnal ..	21,530	42-81	.. ..	<p>Street drains are flushed two main drains which discharge into the old canal, but the outlet channel runs round part of the city as a <i>khudr</i> drain before emptying itself into the canal.</p> <p>A certain amount of filth finds its way into the drains.</p> <p>The small drains are cleaned daily by <i>barsis</i>.</p> <p>The main drains, which at present are never quite clean and free from smell, might be flushed with canal water. The night-soil is thrown into a compound made for the purpose outside the city, and is used as manure. Street rubbish is removed to waste land and sold to <i>zaminidars</i>. The drains are of good brickwork.</p>	<p>Rs. 183 and Rs. 125 were spent on pavements and drainage respectively.</p>	21
22	Kaithal ..	15,768	40-65	.....	<p>There are both public and private latrines, but the drains are used as urinals. The surface drains are also loaded by some of the contents of latrines emptying into them. The drains discharge into fields near the town wall, and the night-soil and street <i>dalas</i> are deposited in eight enclosures about 200 yards from the city.</p>	<p>Rs. 7</p>	22
23	Panipat ..	27,547	36-96	.. ..	<p>The drains are of good brickwork, and discharge into the Ganda nullah, with the exception of the main drain from the Rama Darwaza, which empties itself into a pond 300 yards from the city. The drains are not flushed. A smell of urine is noticed everywhere.</p> <p>Night-soil and street refuse are removed in baskets and bags and deposited on waste land from 400 to 1,000 yards outside the city.</p>	<p>Rs. 100 and Rs. 115 were spent on pavements and water supply respectively.</p>	23

STATEMENT No. XI—continued.

1	2	3	4	5	6	7	8
No.	District.	Name of Municipality.	Population according to census of 1891.	Total death-rate per 1,000 of population.	CHIEF SANITARY DEFECTS.	Remedial measures adopted.	
24		Lādwa ...	4,011	29.92	Water-supply. There are 23 wells, all belonging to the Municipality. Five of these contain good drinking water; the rest are slightly brackish. They are seldom cleaned. There are also tanks and ponds for bathing purposes.	Drainage. There are no public latrines, and although there are some house latrines, fields, adjoining the town, are chiefly used, and are in a filthy state. The drains are open and constructed of good brickwork. They discharge into tanks and ponds, the overflow from which passes into the Rashi nullah. The night-soil and street refuse are removed to fields and waste land. The former is used for cultivation, the latter for brick-burning.	A sum of Rs. 921 were spent in completing excavation of outfall drain in connection with the Lādwa drainage scheme. Rs. 3,189 and Rs. 155 were spent on drainage and water supply, respectively.
25		Shahabad ...	11,473	22.57	Drinking water sufficient and obtained from wells, but these are seldom cleaned. Some of the wells are private property, the others municipal. There are a few ponds and tanks.	There are only house latrines. The soil is removed by sweepers in baskets and on donkeys. It is deposited on waste lands, and used as manure. The drains, which are good, are open and discharge into low land, tanks and ponds. They are not contaminated by house sewage, and are cleaned out by <i>bhisās</i> . The street refuse is removed to waste lands and sold for manure by the municipality.	Rs. 101 were spent on drainage ...
26	KARNAL—contd.	Thānesar ...	6,111	22.91	Drinking water is obtained from wells and is sufficient and apparently fairly wholesome. Most of the wells are private property. All the wells, public and private, are neglected and seldom cleaned out. Tanks and ponds are used for bathing, &c.	There are only house latrines, night-soil and street rubbish collected in baskets and thrown on fields and waste land. Drains are boarded over by shopkeepers and house owners, who claim the frontage, although the municipality dispute their claim. The drains are out of repair, and are clogged in many places. The shopkeepers offer to pay half the cost of constructing new surface drains parallel to the existing ones. The present drains are used as urinals and are never cleaned; they discharge into tanks, ponds and nullahs.	....
27		Umballa ...	26,856	27.14	Water-supply scheme completed in 1895 ...	Drainage very defective, waste water flows into dirty tanks which cannot be emptied or cleaned or a flow into the lanes surrounding the town which are in wet weather absolutely impassable.	A drainage scheme is being prepared by the Executive Engineer. Rs. 125 and Rs. 8,166 were spent on drainage and water-supply respectively.
28	UMBALLA.	Jagādhri ...	13,029	28.40	Water supply liable to pollution ...	Drainage and cleaning defective ...	....
29		Burya ...	6,809	26.73	Ditto ...	Drainage defective ...	.....
30		Sadhaura ...	10,445	23.93	Ditto ...	Drainage very defective, cleaning arrangements unsatisfactory.	.....
31		Rāpar ...	8,693	21.17	Water supply good ...	Natural drainage good. The public latrines are scarcely used, cleaning arrangements very irregular.	.....

32	Simla	13,279	26-63	The water supply is insufficient ..	The sewage collecting tanks are too few in number and night-soil, &c., have to be carried too far on men's heads. The bazar is very much overcrowded.	32
33	Kangra	5,234	32-39	The water supply is obtained from wells and <i>bādis</i> not protected from pollution.	....	23
34	Dharmasāla	2,778	37-08	The drinking water is obtained from 20 <i>lālās</i> or springs which are liable to contamination, that for other purposes from three <i>kats</i> or small aqueducts, which are also contaminated.	.....	34
35	Nūrpur	4,837	38-66	Water is obtained from 2½ wells and 10 tanks. The wells only supply water during the rains. The tanks are principally used. They are liable to pollution and sometimes run dry, thus obliging the inhabitants to get water from a tributary of the Chakkī stream, a considerable distance off.	.....	35
36	Hoshiārpur	17,546	34-71	Several of the wells are not protected with suitable coverings.	The drainage system is not all complete yet, but is being gradually extended year by year as funds are available.	36
37	Khānpur	3,553	40-25	Ditto ditto ditto	All the streets have open masonry drains which discharge into the adjacent stream. Sweepers and <i>bādis</i> are employed for the removal of sewage. The sewage system appears to be efficient.	37
38	Hariāna	7,066	24-91	Several of the wells are not protected with suitable coverings.	.....	38
39	Garhdiwāla	4,045	31-80	Ditto ditto ditto	.....	39
40	Dasūya	7,047	30-65	Ditto ditto ditto	Some of the drains are <i>katcha</i> and some <i>pakka</i> . They are cleaned by sweepers and <i>bādis</i> . The sewage and drainage are let outside the town, but the arrangements are defective and stand greatly in need of improvement.	40
41	Tānda and Urmār	11,632	34-13	Ditto ditto ditto	There are drains, both <i>katcha</i> and <i>pakka</i> , which fall into three large masonry drains, the sewage from which is discharged into an adjacent nullah. Sweepers and <i>bādis</i> clean the drains. The sewage system and sanitary arrangements generally are bad, and stand in great need of improvement.	41
42	Miāni	6,649	24-97	Ditto ditto ditto	.....	42

The whole scheme has recently been considered by the Simla Extension Committee, and proposals involving large expenditure submitted. Rs. 11,199, Rs. 25,946, Rs. 19,588 and Rs. 1,917 were spent respectively on drainage, water-supply, construction of, and repairs to, latrines.

....

The proposed scheme of water supply by iron pipes for the lower ward of the station is under contemplation. The scheme will be carried out as soon as funds are available.

There is a proposal to bring good drinking water from a spring called *bādāl* of Khevalnagar, suburb of Nūrpur town, through iron pipes into the town. The work has been estimated to cost Rs. 3,000. The Committee thinks of obtaining a loan from Government.

New drains of proper form are made every year in place of old improper drains. The owners of fields around the city are served with notices and are prosecuted. Flugs have been put up in the *chō* to make the site for people to go beyond these for purposes of nature. The low places around the city and polluting water supply are being filled up as far as funds allow. The Bahādarpur *katcha* drain collects outside the town and the sewage is used for fields all the year round except in rainy season, when it gives offensive smell. If funds allow this will be drained into the *chō*.

A proposal is under consideration for constructing an embankment to protect the town from being flooded during the rains. Rs. 211 and Rs. 522 were spent on drainage and water supply respectively.

Rs. 2,048 were spent on pavements.

Wells were cleaned and the surroundings kept clean as far as funds allowed.

The establishment was made to work this year and the general cleanliness was reported better.

Wells cleaned and drains were kept clean as far as they could be done.

Wells cleaned and the establishment made to work properly.

STATEMENT No. XI—continued.

No.	District.	Name of Municipality.	Population according to census of 1891.	Total death-rates per 1,000 of population.	CHIEF SANITARY DEFECTS.		Remedial measures adopted.	N
					Water supply.	Drainage.		
43	Hoshiarpur—continued.	Mukerian ..	3,977	39.98	Water-supply sufficient. Wells seldom cleaned.	As above for Tinda except that about half the tank's discharge into one large masonry drain which empties itself into a tank just outside the town, while the sewage of the other half of the drains is deposited outside the town.	..	43
44		Una ..	4,438	31.45	Water-supply efficient. There are 16 wells, which are seldom cleaned.		..	44
45		Anandpur ..	5,100	27.54	Water-supply efficient. There are 50 wells, which are seldom cleaned.		..	45
46	Jullundur.	Jullundur ..	50,375	31.94		The drains inside the town are defective. An extra-mural drain has been recently constructed. It carries off most of the sewage of the town and is flushed by water from a well. The remainder of the sewer is carried into depressions around the town.	Rs. 740, Rs. 1,086, Rs. 982 and Rs. 223 were spent respectively on pavements, drainage, water supply and repairs to latrines.	46
47		Alawalpur ..	4,380	18.95	Drinking water obtained from wells	The street drains are in fair order, but sewage accumulates in fields and low-lying grounds.	..	47
48		Kararpur ..	10,441	28.06		The drainage system requires improvements, the land near the town being badly contaminated by sewage.	Rs. 500 were spent on drainage	48
49		Bungah ..	5,010	46.31		The sewage of the town (with the exception of that of the western portion, which drains into a large <i>kutcha</i> tank) is conveyed by recently constructed drains and deposited some distance from the town.	..	49
50		Rádon ..	10,067	30.47	Ditto. There are 107 wells and is sufficient	The drains are fairly well flushed but badly constructed. The town is on an elevation, which is an advantage as sewage near easily drains off.		50
51		Navashahr ..	5,601	32.14	Contaminated by a <i>jeet</i> near the town	The sewage is deposited on low-lying ground around the town: the drains are flushed by <i>blasts</i> , but they are badly constructed and out of repair.	..	51
52		Phallour ..	6,697	31.81		The drains inside the town are flushed by <i>blasts</i> and discharge into the river. The drainage system is incomplete, but as far as it goes efficient.	..	52
53		Námahar ..	8,520	33.69	From wells	The drains are flushed by <i>blasts</i> and the sewage is emptied into a large <i>kutcha</i> tank just outside the town.	Rs. 101 were spent on pavements	53
54		Nakodar ..	9,740	22.90		The drains are flushed by <i>blasts</i> , but the sewage is allowed to spread over fields and low-lying grounds.	..	54
55		Ludhiana ..	46,024	38.72	The water is obtained from wells, and is, as a rule, sweet. But the water in 15 of the wells is brackish. Water-supply scheme under contemplation	A depression near Lakkar Mandi is being filled up. Some of the streets in the town still need improved drains and better paving. No drains to take away waste water from wells.	Three of the flushing wells, connected with new drainage are being provided with better water lifts. Wooden <i>takht poshes</i> and temporary coverings have been removed off the drains and feeders in Chandra Bazar, and future encroachments discontinued. Courtyard of Kesara-	55

56	Jagrón	...	18,116	20-31	Water-supply sufficient and good, and obtained from wells, but the water in five of the wells is brackish.	There are several large drains and gutters that are bridged over and form floors of shops and houses. Drains are defective and carry water into large <i>katcha</i> tanks around the town. Several streets unprovided with pavings and drains become heaped with slush in rains.	56	Janj has been paved and its water-supply well greatly improved. System of street latrines discouraged. New scheme for carrying away night-soil and sweepings has been initiated. Go-downs made. Preliminaries for water-works project being experimented. Rs. 627, Rs. 3,194, Rs. 161 and Rs. 765 were spent respectively on pavements, drainage, water supply and construction of latrines. Plans and estimates have been prepared for improvement and extension of drainage system. Night-soil and scavenging are removed by donkeys, as carts are too big for narrow streets. Walls were cleaned and most of them disinfected. Some drains and pavements were repaired. The old depressions inside the town were drained away and filled up. Steps have been taken to gradually fill up one of the large <i>katcha</i> tanks behind the dispensary. Rs. 846, Rs. 272 and Rs. 320 were spent on pavements, drainage and water-supply respectively. A drain was built at the foot of the enclosure wall on the northern side for sewage and rain water. The drain on the eastern side has been carried to an adjacent depression. More than 200 feet of the wall has been knocked down to provide passage space to the new dispensary now in course of construction. It has given a lung to the city. The main bazar is being repaired with <i>kauker</i> . Rs. 1,401 were spent on drainage.
57	Ráikot	...	9,381	31-02	Water-supply good and sufficient and obtained from 61 wells. Parapets defective.	The drainage is of an old type. Several streets are without pavements. There is no regular system for flushing the drains. The flood water runs into large depressions which encircle the town all round, and give it the appearance of an island after heavy rains.	57	The extended outfall has improved the drainage, which is flushed freely by a rapid flow from a high tank. This town's sanitation is satisfactory. Rs. 1,928 were spent on drainage.
58	Khanna	...	3,877	32-24	.....	There are no public latrines. Fields are used by both sexes; one of the newly extended outfalls empties itself into a <i>katcha</i> tank still used by people for ablution and washing purposes. At present sewage is wasted.	58	Nothing particular has been done. Wells were cleaned and had one disinfected. Wells keep dirty all round. Sewage finds its way into sandy tracts outside and close by and is there absorbed. Rs. 324, Rs. 763 and Rs. 123 were spent respectively on pavements, drainage and water supply.
59	Máchiwára	...	5,340	33-33	Water-supply good and sufficient. Some wells brackish.	This town is on a water-logged area, being on the old bed of the Sutlej river which has further been saturated by percolation from main line of Sirhind Canal. No proper slaughter-house. Heaps of dung and filth are thrown right up to the foot of the town. Pavements are broken. Water is thrown all over the streets chiefly by <i>hattedis</i> . Drains very shallow and defective. No public latrines.	59	The plans and estimates to remedy the present defective drainage system of the municipalities of Ferozpur, Fazilka and Muktsar are under consideration of the Public Works Department.
60	Ferozpur	...	25,387	28-14	The water-supply is solely from wells which are ill-situated and in many cases unprotected.	The drains are for the most part flushed by water from 2 wells in the city, others are cleaned by <i>hattedis</i> . The drains are, however, defective and inefficient.	60	.....
61	Zíra	...	4,356	28-01	.....	A <i>hattedi</i> and a sweeper are appointed to clean the drains daily.	61	.....
62	Nakhu	...	1,619	22-85	Wells subject to pollution	Ditto	62	.....
63	Dharmkot	...	6,725	29-59	.....	Ditto	63	.....
64	Muktsar	...	5,271	20-68	The supply of good drinking water is not sufficient, and tank water is often used for drinking purposes, which from a sanitary point of view is most objectionable.	The sewage drains are cleaned occasionally by <i>hattedis</i> and sweepers. The rain water charged with impurities from the street drains runs into a large <i>pakka</i> tank and stagnates there, rendering the place unhealthy.	64	.....
65	Fázilka	...	7,568	21-55	Wells subject to pollution	The drains are cleaned by <i>hattedis</i> and sweepers	65	.....

LUDRIANA.

FEROZPUR.

STATEMENT No. XI—continued.

1	2	3	4	5	6	7	8	
No.	District.	Name of Municipality.	Population according to census of 1891.	Total death-rates per 1,000 of population.	CHIEF SANITARY DEFECTS.	Remedial measures adopted		
66	Mooltan.	Mooltan ..	64,265	29.44	<p>Water-supply.</p> <p>There are about 400 wells in the city and about 300 in the suburbs from which the people draw water for domestic purposes. The Hindús go out to bathe in the Wali Muhammad Canal in the inundation season and to the wells around the city in the cold weather. Amongst the Muham-madans the people bathe in their own premises with water in small quantities drawn from the wells adjacent to their houses.</p> <p>The supply of water from wells is abundant, but after analysis has been pronounced impure by contamination with the flow of the subsoil strata.</p>	<p>Drainage.</p> <p>About two-thirds of the city is drained by an underground covered sewer and another short open one discharging into small hollows just outside the city walls. There is also surface drainage for the remaining portion of the city flushed by wells and <i>chistás</i>, the overflow draining into the same hollow.</p> <p>The system is most defective, as the sewage is discharged into hollows within 100 feet of the city walls, and the system having been in force for over 30 or 40 years, the whole area of the land is converted into bog. Fortunately, these hollows are always under cultivation, and this must be the cause of counteracting and destroying the deleterious effluvia from such accumulations of fetid matter so close to the city.</p> <p>After rain these hollows get filled with storm-water from the city and suburbs, sometimes to overflowing.</p> <p>Short lengths of the side gutters of streets in the city are out of train by subsidence during heavy rains in the past and current years, and have left pools here and there which prevent the water running clean off.</p>	A scheme for supplying water from wells sunk near the Idgah is under consideration. The preliminary project of the drainage of the Mooltan city is in hand. Rs 1,081 was incurred on the preliminary survey of the city and its suburbs. Rs. 11,373, Rs. 5,738, Rs. 10,225 and Rs 119 were spent respectively on pavements, drainage, water-supply and repairs to latines.	66
67	Kahror ..	..	5,498	13.83	Drains need repairs. North and south drains end in cess-pools just outside town.	.....	67
68	Shujabad ..	..	6,332	30.97	Drains need repairs. Drains end just outside town in a cess-pool. Liable to floods from Sutlej.	.....	68
69	Jalálpur ..	..	9,884	40.94	From drinking wells ..	.....	69
70	Talamba ..	..	2,792	17.19	.....	.....	70
71	Duniapur ..	..	2,101	34.27	.....	.....	71
72	Jhang ..	..	8,476	38.23	Liable to flooding from the Chenáb, but to a less extent than in the case of Maghiána.	.....	72
73	Maghiána...	..	13,866	42.33	The low ground on the north-west much affected by floods from the Chenáb.	.....	73
74	Chinfol ..	..	13,476	42.15	One large hollow outside the town and drainage water from the east collects there. Some drains still remain to be built.	Drains will be built as funds permit	74

75	Montgomery	5,159	17-25							The surroundings are not looked after. Pakka drains are required for the town.	No remedial measures completed up to the present. Rs. 175 and Rs. 325 respectively were spent on drainage and water-supply.	75
76	Kamalia	7,490	24-37							The surroundings are very dirty and require attention ...	No remedial measures completed up to the present. Rs. 464 were spent on water supply.	76
77	Pakpattan	6,522	31-74							The latrines and slaughter-house require proper attention ...	No remedial measures completed up to the present	77
78	Lahore	159,597	34-17							The natural drainage is fair. There is no swampland in the town. The sewage drains in the bye-lanes in the city and in Anarkali are of an obsolete pattern and are broken and with insufficient fall. The night-soil and sweepings are removed by cultivators' carts.	The new drainage works of the city and Anarkali are in hand and will probably be completed during the year. A project for the extension and improvement of the water-supply system has been sanctioned by Government and will be put in hand as soon as sanction has been received to the loan applied for. A scheme for a conservancy tramway, which will supersede existing conservancy arrangements, is under the consideration of Government.	78
79	Sharapur	4,924	28-84							The streets and drains are cleaned as usual by the conservancy staff.	.....	79
80	Chunian	10,389	45-56							The system of drainage defective ...	A drainage scheme for the Chunian Municipality is in hand. The map of the town has been prepared and levels are being taken under the direction of the Executive Engineer.	80
81	Khudian	2,921	32-52							The street drains require repairing	.....	81
82	Kasur	20,280	30-90							Drainage system defective ...	The Kasur Municipality has proposed the building of a drain outside the Paliwala Gate, and the plan and estimate are under preparation. As soon as they are approved by the Executive Engineer the work will be put in hand.	82
83	Khamkarn	5,935	31-34							Drains require repairing	The Khamkarn Municipality have proposed the construction of drains in their town, and plan and estimate are under preparation. The whole work is estimated to cost about Rs. 1,500.	83
84	Patti	7,495	32-29							.....	Orders have been lately issued for the taking of levels in Patti with a view to the preparation of a drainage scheme at the expense of the Municipal Funds.	84

MONTGOMERY.

LAHORE.

STATEMENT No. XI—continued.

XXXVI.

1	2	3	4	5	6		7	8	
No.	District.	Name of Municipality.	Population according to census of 1891.	Total death-rates per 1,000 of population.	CHIEF SANITARY DEFECTS.			No.	
					Water-supply.	Drainage.	Remedial measures adopted.		
85	AMRITSAR.	Amritsar ...	135,401	40.38	The water-supply is from wells ...	The system in force is flushing by canal water outside and by manual labour inside the city. Storm-water is carried off through open channels specially constructed by Government and the Municipality. The system of surface drains for sewage is the one best suited to Amritsar, and the system of <i>katcha</i> open channels for storm drainage (extra-mural) has so far worked well.	The water-supply is capable of great improvement, and a scheme is now under the consideration of Government. Rs. 1,971, Rs. 5,773, Rs. 2,472 and Rs. 253 were respectively spent on pavements, drainage, water-supply and repairs to latrines.	85	
86		Majitha ...	6,417	29.30	...	...	A project for draining the town of Majitha is under consideration of the Public Works Department.		86
87		Jandiala ...	7,732	32.98	From wells ...	The sewage and drainage of these towns are disposed of through open masonry drains. The drainage of storm-water is not dealt with.	The drainage scheme of the towns of Tarn Taran and Jandiala is under consideration, and will be carried out as funds will permit.		87
88		Tarn Taran ...	3,900	31.08	...	...	...		88
89	GURDASPUR.	Gurdaspur ...	5,189	33.34	...	Drainage lies low ...	Rs. 142 were spent on drainage ...		89
90		Dinaagar ...	5,454	40.34	...	No drains remain to be made <i>pakka</i> . The sewage is carried away by sweepers; the system is efficient.	Rs. 705 were spent on drainage ...		90
91		Kalanour ...	5,286	32.16	...	Land much irrigated all around ...	Rs. 153 were spent on drainage ...		91
92		Pathankot ...	4,749	47.17	...	Half the drains have been completed and half remain to be done. The sewage is removed on donkeys, and also carried away by sweepers; the system is efficient.	Rs. 182 and Rs. 264 were spent respectively on pavements and drainage.		92
93	GURDASPUR.	Sujánpur ...	5,796	29.33	From wells ...	...	Rs. 219 and Rs. 115 were spent on pavements and drainage respectively.		93
94		Dalhousie ...	807	52.04	...	There are a number of excavations full of dirty water on the south and east of the town. The sewage is removed out in hand carts by sweepers; the system is efficient.	Rs. 1,170 were spent on water supply ...		94
95		Batala ...	27,223	29.97	...	...	A commencement will be made this year of cleaning out the Kasur nullah in order to prevent water-logging. Ultimately some of the depositions near the town will be drained into the nullah. The work to be undertaken on the nullah will cost over Rs. 6,000. Rs. 1,400 and Rs. 412 were respectively spent on pavements and water supply.		95

96	Srigobindpur	4,359	35.33	Well water brackish	Water has abrupt fall	Rs. 220 were spent on pavements	96
97	Dera Nānak	5,750	29.57	From well	The drainage in the eastern part of the city is not good. The sewage is removed on donkeys by contractors; the system is efficient.	Rs. 500 were spent on water supply	97
98	Siālkot	33,065	44.13	Very few public wells now remain unprotected by parapets and platforms.	In some of the <i>mohallas</i> the old pattern brick drains of rectangular shape set in mud, or a slight depression in the centre of the pavement, for the drainage to run down still exist.	A scheme for the supply of water for the town and cantonment of Siālkot has been under consideration for some years in the Public Works Department. As far as funds will allow the defective drainage is being replaced by properly constructed drains of conoid bricks of semi-circular shape such as have been made in most streets of the town in recent years. All the wells will be put into a condition to prevent the foul water returning into them and to protect them from pollution	98
99	Daska	6,493	32.34				99
100	Jānki	4,029	30.21				100
101	Kila Sobha Singh	4,521	24.34				101
102	Paavār	9,200	27.23	In all these towns the water supply is obtained from wells, some of which still remain unprotected by parapets or platforms.	In many of the <i>mohallas</i> the streets are paved with small bricks with a slight depression in the centre or the old fashioned rectangular brick drains down which the sewage runs; there is doubtless a good deal of leakage in the subsoil before the sewage ultimately finds its way into the ponds and depressions in the vicinity of the towns.	In all the towns improvements are being gradually made, as far as the limited means at their disposal will permit, wells are being provided with parapets or platforms of masonry, and most of the wells are cleaned out annually.	102
103	Zafarwāl	5,536	25.88				103
104	Nārowāl	4,896	29.81				104
105	Gujrat	17,671	36.56		The main drain by the Grand Trunk Road is filled up with silt	Rs. 253, Rs. 268 and Rs. 517 were spent on pavements, drainage and water supply respectively	105
106	Jalālpur	11,065	42.30	Water supply is from wells			106
107	Kunjah	5,474	31.24		After rains swamps are formed in the neighbourhood	Rs. 172 were spent on pavements	107
108	Dinga	5,124	31.71			Rs. 250 and Rs. 462 were spent on drainage and water supply respectively.	108
109	Gujranwāla	25,892	24.93		The disposal of the sullage water is not satisfactory.	The scheme for the improvement of the sewerage of the Gujranwāla town has been partly carried out and is again under consideration with a view to further operations. Rs. 6,600, Rs. 1,507 and Rs. 714 were spent respectively on pavements, drainage and water supply	109
110	Wazirabad	15,786	48.84	Direct from wells, quality bad. Water supply scheme under consideration.	Streets and drains are cleaned by sweepers. Solids are removed outside the town on donkeys. Sullage is not utilized; drains are flushed by watermen. Sullage is removed towards Pakhan stream. Not satisfactory.	The Government have decided to remedy the drainage of the town with a view to allow the town people a pure water supply. Rs. 1,073, Rs. 611 and Rs. 318 were spent on pavements, drainage and water supply respectively.	110

STATEMENT No. XI—continued.

1	2	3	4	5	6	7	8
No.	District.	Name of Municipality.	Population according to census of 1891.	Total death-rates per 1,000 of population.	CHIEF SANITARY DEFECTS.	Remedial measures adopted.	
					Water supply.	Drainage.	
111		Eminabad	5,841	39.89	.....	Sullage is not used; drains are only partly flushed by water-men. Not satisfactory.	111
112		Kila Didar Singh,	2,843	29.55	... ..	Subsoil of neighbourhood damp	112
113		Akhalgarh	4,262	23.70	... ..	Neighbouring country liable to flooding	113
114		Ramnagar	6,592	41.72	... ..	Drains are cleaned by sweepers, who remove the solids on donkeys. Sullage is not utilized, drains are flushed by water-men. Sullage is removed towards Palkhu stream. Not satisfactory.	114
115		Bhera	17,428	29.78		Drainage faulty, the outfall being close to the town, and ruin water lodges in depressed area surrounding the town.	115
116		Shahpur	6,337	25.56	Direct from wells. Supply abundant and sweet.	Drainage insufficient and cloggy. Wells foul. The Sadar station much the same and faulty in latrine arrangements, not only too few but too far to meet the wants of the Sadar bazar.	116
117		Sahiwal	9,210	31.49		Drainage faulty. Surroundings very insanitary with stagnant tanks on the road side. Wells foul.	117
118		Mian	7,149	30.63		Drainage faulty and cloggy. Manure in stocks just outside the town, houses in view. Streets narrow and dirty.	118
119		Khushab	9,892	21.16	Water from the river (very dirty) used for drinking	Tops of houses used as latrine and uncared for	119
120		Jhelum	9,711	32.54	Water supply from the river and from wells	Connection of the large sewer which drains part of the north end of the town with the river and making it entirely of masonry. At present it is only <i>pakka</i> and much too wide for a short distance from the town. The great fault in the internal sanitation of the town is the failure of house owners to connect their house drains with the street drains.	120
121		Pind Dadan Khan,	15,065	31.94	The existing arrangements for water supply are defective as regards quantity and quality.	.....	121

122	Rawalpindi	38,334	37-90	Water supply scheme completed in 1887	...	Drainage defective	...	...	...	In Rawalpindi Municipality a combined drainage scheme for city and cantonment at an estimated cost of Rs. 1,47,154 has been sanctioned, and an internal drainage scheme is under consideration. Rs. 350, Rs. 2,857 and Rs. 2,105 were spent respectively on pavements, drainage and water supply	122
123	Murree	1,459	32-90	Ditto	in 1894	.....	.....	.....	.....	Separate drainage channels should be constructed for the more thickly inhabited parts when funds are available. Rs. 9,499 were spent on water supply	123
124	Pindigheb	8,462	24-34	.....	.....	.....	.....	.....	.....	Rs. 250 were spent on water supply	124
125	Hazro	9,261	27-43	Wells liable to contamination	...	No regular drains	...	...	...	An estimate for Rs. 6,326 has been sanctioned by the Punjab Government for the construction of a drainage scheme for Hazro, and the Committee has agreed to have the project of external drainage carried out by the Public Works Department.	125
126	Attock	2,654	44-46	.....	.....	.....	.....	.....	.....	Rs. 388 and Rs. 1,180 were spent, respectively, on water supply and construction of latrines.	126
127	Abbottabad	2,242	13-38	Water supply good, but liable to pollution in catchment area.	...	Sullage water brought down in masonry drain from town up to municipal limits, and then discharged into the Dhobi Ghat nullah, where it soaks into the soil.	...	...	...	The work for the diversion of the town drainage at Abbottabad is in abeyance. Rs. 281 were spent on water supply	127
128	Nawashahr	3,885	29-80	Unknown; but like all open supplies must be liable to contamination. The Narn nullah flows close to the town, and it is the source of the water supply.	...	Petty rural municipality. No latrines	...	...	...	To build latrines in petty rural municipal towns of Baffa and Nawashahr will be useless, as the people resort to the fields	128
129	Baffa	7,437	33-21	Water supply from Siran river, good but liable to contamination.	...	Ditto	.....	.....	.....	.....	129
130	Haripur	5,419	24-17	A pipe supply from springs at Makled-ki-Bagh about 7 miles distant. A very good supply.	...	Beyond the ordinary occasional nuisances of the cleansing department, there are none of particular gravity.	...	...	...	Rs. 2,298 were spent on water supply	130
131	Peshawar	63,079	29-53	Water supply project completed in 1892	...	Drainage project completed in 1888	...	...	...	The city drains are being gradually re-made. The city is supplied with pure drinking water, and house connections are in progress. A considerable improvement has been effected during the last few years in these works. Rs. 1,842, Rs. 16,576, Rs. 9,278 and Rs. 243 were spent, respectively, on pavements, drainage, water supply and construction of latrines.	131

RAWALPINDI.

HAZARA.

PESHAWAR.

STATEMENT No. XI—concluded.

1	2	3	4	5	CHIEF SANITARY DEFECTS		7	8
No.	District.	Name of Municipality.	Population according to census of 1891.	Total death-rates per 1,000 of population.	Water supply.	Drainage.		
132	Kohat.	Kohat	14,947	28.65	Water supply good	Drainage efficient, and the city is very well supplied with public surface and sewer drains.	Reopened but is not yet adopted	132
133	Kohat.	Edwardesabad	0,695	53.16			The opening of the water supply which was used for drinking and bathing purposes was not yet started at Rs. 1,202 as to prevent the pollution of the water by filth and dirt, and no water was then previously exposed.	133
134	Bannu.	Isakhel	7,600	25.79	The wealthy get their drinking water from the Indus; canal water is used by others, and when the canal is dry water is obtained from 2 tanks. System inefficient	The drainage system is inefficient	Rs. 1,306, Rs. 56.2 and Rs. 3,627 were respectively spent on pavement, drainage and water supply respectively.	134
135		Kalabagh	6,702	38.79		There are a few drains, and the streets are very steep. System is inefficient.	Measures are being taken to improve the main drain	135
136		Lakki	4,488	47.24	Water in the wells is brackish: drinking water is obtained from the Gambilla river.	Streets and lanes are unpaved and undrained	...	136
137		Dera Isma'il Khan	21,573	53.86	Drinking water is good and sufficient which is obtained from wells.	Town situated on nearly dead level ground with a very gentle slope towards the Indus. Subsoil water is 20 ft. from surface. The drainage is very unsatisfactory. The slope is too slight to carry away the water which collects and stagnates, and has to be removed in water carts.	Measures are being taken to improve the sanitary defects in the town. A cart has been purchased to carry away muddy water at a cost of Rs. 132.	137
138	Isma'il Khan.	Kulachi	9,447	17.78	Drinking water is obtained from shallow pits dug in the bed of the Luni, in which the water is sweet but muddy. The water from wells inside the town is brackish.	The town is situated on the left bank of the Luni. Subsoil water is 30 feet below ground, and sewage fair. The drainage of the town is far from satisfactory. Rain-water collects and stagnates in the streets and drains for days and weeks.	Rs. 826 and Rs. 143 were spent on pavements and latrines respectively.	138

139	DERA	Shakkar ...	5,210	43-38	Drinking water obtained from wells; the water is clear, tasteless and wholesome. The wells have no proper fencing around them, and are seldom cleaned.	The town is built on the high bank of the Thal close to the Kachhi or riverain tract, which is annually flooded by the Indus. The natural drainage of the town is good. Subsoil about 80 feet from the surface. Sewage fair.	.....	140
140		Leiah ...	7,437	28-40	Drinking water is obtained from wells, which is good and wholesome, but many of the wells have no parapets, and they are not regularly cleaned.	Only the main basar has pakka flooring, but the kachids are katcha ones, and they have no proper drains.	...	141
141		Karor ...	2,833	48-95	Water is obtained from wells which is good and sufficient. Wells have no copings around them.	.....	...	142
142		Dera Ghazi Khan ...	28,899	30-04	Water-supply is obtained from 243 wells in the city. Water is contaminated with organic matter owing to crowded state of houses. The wells are annually cleaned out. There is no regular system of water-supply; the water is bad owing to the very high spring level.	Drainage very imperfect.	A scheme is before Government for sanction, for which the Municipal Committee has sanctioned a sum of Rs 20,000. Rs 378, Rs 158 and Rs. 103 were spent on drainage, water-supply and repairs to latrines, respectively.	143
143	DERA GHAZI KHAN.	Jampur ...	5,815	31-81	From wells, the water of which is good in quality. There is no regular system for water-supply.	The town is surrounded by land irrigated by inundation canals. Very little fall towards the Indus. Subsoil water about 27 feet from surface. There is no regular system of drainage.	Rs 409 were spent on pavements	144
144		Dajal ...	6,085	51-60	Water-supply is from a tank filled at intervals by water from the Harraud hill stream. The water is of good quality. There is no regular system of water-supply.	There is good natural drainage into beds of hill streams. There is no regular system of drainage.	Rs. 197 were spent on water supply	145
145		Rajampur ...	4,064	28-79	Water-supply is from 38 wells, in 12 of which the water is bad. There is no regular system of water-supply.	The drainage is not good. Subsoil water is 22 feet from the surface. There is no regular system of drainage.	...	146
146		Kot Mitthan ...	3,624	23-73	Water-supply is from 12 wells, some of which are sweet and others brackish. There is no regular system of water-supply.	There are no swamps. The subsoil water is 16 feet from the surface. There is no regular system of drainage.	...	147
147	MUZAFFARGARH.	Muzaffargarh ...	3,068	34-34	There is no regular system of water-supply. Water is obtained from wells.	There is no regular system of drainage, and the drainage is defective.	A scheme for improving the drainage of Muzaffargarh city is under consideration of the Public Works Department. Rs 624 were spent on pavements.	148
148		Khanagah ...	3,505	34-24	There is no regular system of water-supply, and is brackish.	There is no regular system of drainage	Rs. 125 were spent on drainage	149
149		Alpur ...	2,552	33-31	The water is obtained from wells, which is pretty clean.	Ditto	Rs 150 were spent on construction of latrines	150
150		Khairpur ...	2,424	50-74	The water is obtained from wells. The wells are covered and protected.	Ditto	...	

APPENDIX A.

STATEMENT SHOWING BIRTHS AND DEATHS REGISTERED IN THE
SELECTED VILLAGES SITUATED ON THE WESTERN JAMNA
CANAL DURING THE YEAR 1898.

APPENDIX A.

STATEMENT SHOWING BIRTHS AND DEATHS REGISTERED IN THE SELECTED VILLAGES SITUATED ON THE WESTERN JAMNA CANAL DURING THE YEAR 1898.

[illegible]

APPENDIX A—continued.

No.	Names of villages.	POPULATION AC- CORDING TO CENSUS OF 1891.			TOTAL NUMBER OF BIRTHS REGISTERED.			TOTAL NUMBER OF DEATHS REGISTERED.			CAUSES OF DEATH.			AGE AT DEATH.												No.															
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Cholera.	Small-pox.	Fever.	Dysentery and diarrhoea.	Injuries.	All other causes.	Males.	Females.	Under 1 year.	5 and under 10.	10 and under 15.	15 and under 20.	20 and under 30.	30 and under 40.	40 and under 50.		50 and under 60.	60 and up- wards.													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
Delhi District—concd.																																									
11	Ratangarh ..	2,068	1,770	3,838	115	71	186	79	67	146	48	88	..	..	128	2	..	16	31	22	15	16	6	4	2	2	1	4	8	4	1	6	10	5	4	5	4	5	4	
12	Bhatgaon	8	8	2	4	..	2
13	Bagra... ..	328	289	617	12	9	21	5	11	16	34	26	9	1	..	2	..	2	
14	Khizarpur Jat ..	176	140	322	5	4	9	3	7	10	28	31	9	1	..	2	..	2	
15	Hula Heri ..	381	333	714	18	17	35	9	5	14	40	20	3	3	..	8	3	3	1	
16	Barvasani ..	913	773	1,686	40	38	78	24	22	46	46	27	31	3	..	12	11	7	3	6	
17	Garhi Brahminan ..	267	234	501	13	6	19	14	8	22	38	44	10	6	..	6	4	1	3	3	
18	Mahlana ..	785	642	1,427	33	23	56	18	18	36	39	25	24	3	..	7	2	6	9	4	
19	Tihar Khurd...	300	263	563	10	11	21	6	1	7	37	12	1	3	3	..	1	
20	Hasanpur Tihar Kalan ..	159	149	308	6	9	15	5	5	10	49	32	7	3	
21	Kakroi ..	1,001	882	1,883	50	47	97	29	25	54	52	29	39	3	..	12	10	7	8	4	
22	Bhadana ..	530	479	1,009	24	28	52	15	13	28	52	28	20	8	4	3	2	
23	Kheri Daiya ..	286	253	539	11	7	18	9	1	10	33	19	4	6	3	1	4	
24	Robat ..	1,161	1,006	2,167	50	58	108	44	42	86	50	40	73	1	..	12	6	11	12	8	2	2	
25	Jharaut ..	327	255	582	13	12	25	6	14	20	43	31	15	5	4	3	..	4	..	2	
26	Anandpur ..	162	116	278	5	5	10	5	6	11	36	40	7	4	2	
27	Pugthala ..	971	857	1,828	40	24	64	27	29	56	35	31	46	1	..	9	7	8	6	5	3	1	
28	Thana Kalan...	906	909	1,875	35	43	78	20	32	52	42	28	49	3	5	11	6	11	2	
29	Mandawri ..	436	353	789	19	31	50	5	15	20	63	25	13	1	..	6	1	8	..	2	2	
30	Jataula ..	322	296	618	10	11	21	9	11	20	34	32	11	3	..	6	3	3	..	3	1	1	

APPENDIX A—concluded.

No.	Names of villages.	3		4		5		6		7		8										9																		
		POPULATION AC- CORDING TO CENSUS OF 1891.		TOTAL NUMBER OF BIRTHS REGISTERED.		TOTAL NUMBER OF DEATHS REGISTERED.		Birth-rate per mille of population.		CAUSES OF DEATH.		AGES AT DEATH.																												
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Cholera.	Small-pox.	Revers.	Dysentery and diarrhoea.	Injuries.	All other causes.	Under 1 year.	1 and under 5	5 and under 10.	10 and under 15.	15 and under 20.	20 and under 30.		30 and under 40.	40 and under 50.	50 and under 60.	60 and up- wards.														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
Karnal District.																																								
1	Karakwāli ..	67	58	125	1	...	1	1
2	Sitoundi ..	705	619	1,324	23	22	45	42	37	79	34	60	...	...	39	...	...	10	9	7	16	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Jhinwarheri ..	206	192	398	10	7	17	8	11	19	43	48	...	...	17	...	...	2	4	6	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	Hasanpur ..	210	193	403	14	5	19	12	9	21	47	52	...	...	15	...	...	6	1	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Rasine ..	211	198	379	6	5	11	9	4	13	29	34	...	...	9	1	...	3	3	1	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	Upli ..	29	21	50	1	1	2	1	1	2	40	40	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	Phurlak ..	635	612	1,247	21	28	49	23	25	48	89	38	...	...	26	...	...	1	21	9	8	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bādshahpur ..	37	22	59	...	...	...	1	...	1	...	17	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	Malakpur ..	141	96	237	13	8	21	5	10	15	89	63	...	...	11	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	Gharunda ..	2,743	2,133	4,876	126	103	229	98	76	174	47	36	...	...	99	...	...	1	71	31	26	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11	Kora Kheri ..	111	92	203	5	5	10	6	9	15	19	74	...	...	12	...	...	3	2	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	Shekpura ..	399	378	777	21	10	31	12	12	24	40	31	...	...	14	...	...	9	6	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13	Begampur ..	180	156	336	3	5	8	6	7	13	24	39	...	...	10	...	...	5	4	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	Dudlāna ..	438	390	816	15	10	31	19	21	40	38	49	...	...	27	...	...	13	1	7	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
15	Kutāna ..	64	72	136	...	4	4	1	1	2	29	15	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	Gurha ..	660	587	1,247	18	19	37	22	15	37	30	30	...	...	26	...	...	17	5	4	8	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	Kohand ..	689	471	1,160	35	20	55	31	14	45	47	39	...	...	33	...	...	12	5	9	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18	Gunjbār ..	355	293	648	13	14	27	12	7	19	43	29	...	...	17	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	Bārawli ..	458	337	815	26	21	47	27	14	41	53	50	...	...	18	...	...	1	22	12	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	Gagsina ..	1,397	1,190	2,587	72	72	144	65	62	117	56	45	...	...	54	...	...	1	62	19	18	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	Bābarpur ..	197	152	349	9	8	17	11	7	18	53	56	...	...	18	...	...	3	8	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22	Rer Kalān ..	826	753	1,579	25	33	59	28	35	63	37	40	...	...	52	...	...	11	4	13	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

APPEN

STATEMENT SHOWING THE INCOME AND EXPENDITURE OF MUNICI

1	2	3	4	5	6	7	8	9	10
No	NAME OF DISTRICTS	Number of municipal towns in each district.	ASSETS.			Dis			
			Balance from previous year	Annual income for the year.	Total	Conservancy establishment.	Paving	Roads and bridges.	Drainage or sewerage.
1	2	3	4	5	6	7	8	9	10
Delhi Division.									
1	Hissar	5	Rs 11,445	Rs. 1,26,626	Rs 1,38,071	Rs. 17,816	Rs 852	Rs. 13,222	Rs. 470
2	Rohtak	5	22,001	68,524	90,525	6,266	1,200	2,657	..
3	Gurgaon	6	53,736	95,913	1,49,649	8,987	2,466	12,073	614
4	Delhi	4	38,120	4,69,368	5,07,488	82,426	296	21,339	3,574
5	Karnal	6	24,750	1,02,965	1,27,715	12,550	663	2,903	3,498
6	Umballa	5	7,032	1,00,183	1,07,215	10,759	..	4,679	180
7	Simla	1	64,202	3,45,620	4,09,822	34,754	..	32,986	11,199
Jullundur Division.									
8	Kangra	3	3,542	24,203	27,745	3,430	352	1,340	5
9	Hoshiarpur	10	8,827	73,291	82,118	10,098	424	3,680	2,220
10	Jullundur	9	26,557	1,21,582	1,48,139	16,649	1,211	6,085	2,365
11	Ludhiana	5	20,937	1,38,783	1,59,720	13,400	1,836	3,917	6,647
12	Ferozepore	6	70,691	87,673	1,58,364	9,077	193	7,285	627
Lahore Division.									
13	Multan	6	74,082	1,97,662	2,71,744	23,715	11,393	16,507	5,849
14	Jhang	2	18,263	66,817	85,080	8,741	700	2,474	263
15	Montgomery	3	46,158	31,084	37,242	3,082	88	24	181
16	Lahore	7	1,17,939	5,80,042	6,97,981	74,487	214	28,273	19,855
17	Amritsar	4	438,522	4,95,536	5,34,058	72,532	2,149	16,563	5,980
18	Gurdaspur	9	39,427	1,22,913	1,62,370	14,830	2,115	1,760	2,141
Rawalpindi Division.									
19	Sialkot	7	13,501	1,39,232	1,52,733	17,880	1,232	1,083	4,813
20	Gujrat	4	9,272	44,304	53,576	5,312	440	605	584
21	Gujranwala	6	38,120	1,19,860	1,57,989	16,728	7,892	1,093	2,349
22	Shahpur	5	3,986	57,238	66,224	7,200	1,263	149	370
23	Jhelum	2	14,213	59,290	73,503	7,029	331	1,233	262
24	Rawalpindi	5	1,11,076	2,89,738	4,99,744	44,122	350	9,243	2,942
Peshawar Division.									
25	Hazara	4	6,013	37,201	43,214	5,369	..	340	37
26	Peshawar	7	31,035	2,04,694	2,35,729	21,211	1,842	1,825	16,578
27	Kohat	1	20,949	42,877	63,826	5,056	..	832	1,867
Derajat Division.									
28	Bannu	4	31,523	68,278	99,801	9,580	1,306	266	562
29	Dera Ismail Khan	6	9,576	1,01,703	1,11,279	13,856	1,416	1,910	142
30	Dera Ghazi Khan	5	26,518	1,00,299	1,26,817	10,113	400	2,306	510
31	Muzaffargarh	4	24,432	28,168	52,600	3,722	690	633	204
TOTAL		150	9,91,384	45,40,697	55,32,081	5,90,777	43,314	1,99,285	96,888

* The difference in the opening balance due to a mistake in the
† Difference in the opening balance in Amritsar district due to

DIX B.

PALITIES IN EACH DISTRICT OF THE PUNJAB DURING THE YEAR 1898.

11	12	13	14	15	16	17	18	19	20	21	22	23
BURSEMENTS										Total expended	Balance unexpended	No
Water-supply in- cluding cleaning and repairs of wells, tanks, &c.	Widening of streets.	Construction of latrines	Repairs of latrines.	Total sanitary charges.	Vaccination	Dispensaries	Police	Schools	Miscellaneous			
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
5,334	380	38,074	1,715	13,042	25,310	21,700	27,250	1,28,087	9,984	1
260	5	..	91	10,479	161	9,093	7,939	18,931	14,530	61,123	20,402	2
1,104	461	25,705	113	11,466	16,195	21,641	20,190	1,04,910	44,739	3
39,305	229	1,47,169	2,320	29,343	67,072	38,158	1,49,068	1,33,930	73,558	4
485	17	20,116	1,142	7,563	21,166	22,750	25,077	97,820	20,895	5
8,268	148	24,034	652	14,611	12,933	19,441	23,119	91,793	12,422	6
27,738	..	19,588	2,307	1,28,272	437	14,895	15,265	2,635	1,34,697	2,96,101	1,13,631	7
61	10	5,198	361	6,422	1,472	1,695	6,459	24,607	3,138	8
524	..	10	45	17,001	827	7,157	12,187	17,819	16,518	71,509	10,609	9
1,176	100	..	338	27,924	1,067	16,040	17,367	20,371	29,307	1,20,166	27,973	10
730	2	765	112	27,409	940	15,975	15,438	27,605	33,139	1,20,706	39,014	11
57	8	..	13	17,260	911	13,189	11,416	19,221	32,924	94,924	63,440	12
10,859	419	68,712	953	17,962	30,738	25,758	55,375	2,08,528	63,216	13
122	192	12,492	306	13,160	8,285	19,956	9,284	62,573	22,507	14
847	..	15	76	4,313	365	6,594	2,552	9,506	6,136	29,196	7,746	15
25,195	..	114	519	1,48,657	2,369	26,476	60,619	21,019	3,23,972	5,83,142	1,14,839	16
2,481	..	37	253	99,995	1,185	38,455	57,983	65,181	2,04,553	4,70,955	63,103	17
2,510	42	23,298	378	11,414	14,401	31,921	31,365	1,12,877	49,493	18
2,619	..	383	72	28,082	473	11,570	21,078	24,531	19,580	1,35,314	17,419	19
1,155	35	8,131	186	8,277	8,157	13,220	9,724	46,995	6,581	20
1,424	96	29,582	1,119	9,296	13,310	21,500	12,508	1,17,351	40,638	21
14	8,995	531	6,421	9,551	15,514	7,230	48,726	17,498	22
1,703	158	10,716	319	7,489	10,126	11,881	14,182	55,313	18,190	23
12,242	..	1,180	87	70,166	1,392	25,003	21,017	10,886	1,11,641	2,70,105	1,29,639	24
2,069	20	8,135	894	3,090	1,715	7,135	5,533	33,204	10,010	25
9,278	213	50,947	1,259	19,227	32,552	12,207	61,553	1,96,745	38,984	26
2,746	82	10,583	507	778	1,496	7,807	19,936	44,257	19,569	27
3,657	..	51	74	15,196	1,079	6,611	8,117	10,391	12,512	54,539	15,262	28
754	..	78	220	18,376	602	12,097	11,863	11,810	24,349	79,097	32,182	29
387	142	13,833	1,228	6,726	9,306	17,674	35,895	84,667	42,150	30
115	..	150	..	5,514	240	6,594	2,508	7,691	6,254	28,801	23,799	31
1,65,799	115	22,371	6,551	11,25,100	27,681	3,95,844	5,64,933	5,95,047	16,02,846	43,11,451	12,20,680	

closing balance of the Pakpattan Municipality last year.
the exclusion of Rām Dās notified area from the returns of this year.

APPENDIX C.

STATEMENT SHOWING THE RAINFALL IN INCHES AT THE SAID STATIONS OF THE PUNJAB DURING THE YEAR 1908

No.	STATIONS*	MONTHS.												QUARTERS.				Total.	No.	
		MONTHS.												QUARTERS.						
		January	February	March	April	May	June	July	August	September	October	November	December	Total	1st Quarter.	2nd Quarter.	3rd Quarter.			4th Quarter.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	Hissar ...	0.03	1.48	..	..	2.01	2.15	3.87	0.24	0.69	..	..	1.01	11.18	1.51	4.16	4.80	1.01	11.48	1
2	Rohatk ..	..	1.40	..	..	2.58	4.10	7.16	2.08	1.79	..	..	0.82	19.93	1.10	6.68	11.03	0.82	19.93	2
3	Gurgaon ..	..	2.11	..	..	0.39	2.53	3.86	4.46	0.51	..	..	0.83	15.02	2.11	3.52	8.83	0.51	17.85	3
4	Delhi ...	..	2.86	..	..	0.60	0.50	5.96	5.78	1.01	..	0.31	0.83	17.85	2.86	1.70	12.75	1.14	17.85	4
5	Karnal ..	..	5.94	..	..	0.20	3.93	6.58	2.30	2.33	..	0.95	1.23	23.46	5.94	1.13	11.21	2.18	23.46	5
6	Unballa ..	0.05	9.10	0.02	0.14	0.39	3.89	7.79	5.76	3.73	..	..	1.39	31.77	9.17	4.12	17.09	1.39	31.77	6
7	Simla ...	0.79	5.20	0.11	0.80	1.21	9.01	10.14	18.77	2.72	..	0.13	3.69	52.36	6.10	11.11	31.93	3.22	52.36	7
8	Dharnasla ..	1.30	9.20	0.35	..	1.94	13.06	46.80	39.21	5.93	0.31	..	6.50	124.69	10.94	15.00	91.91	6.81	124.69	8
9	Hoshiarpur ..	0.42	5.50	..	..	..	2.21	14.97	8.02	5.65	..	..	4.59	41.36	5.92	2.21	28.64	4.59	41.36	9
10	Jullundur ..	0.54	3.65	..	..	0.07	3.48	7.87	3.12	2.33	..	..	1.48	22.51	1.19	3.55	13.32	1.48	22.51	10
11	Ludhiana ..	0.55	3.39	..	..	0.13	2.12	12.22	1.40	2.52	..	..	1.81	24.34	1.14	2.25	16.11	1.81	24.34	11
12	Ferozepore ..	0.58	3.66	..	..	0.88	2.23	8.21	..	1.65	..	..	0.52	17.76	4.21	3.11	9.89	0.52	17.76	12
13	Moolkan ..	0.15	1.25	..	..	0.08	0.14	1.48	..	0.42	..	..	0.01	3.53	1.40	0.22	1.90	0.01	3.53	13
14	Jhang ...	..	1.17	..	..	0.24	0.67	2.25	..	0.65	..	..	0.05	5.03	1.17	0.91	2.90	0.05	5.03	14
15	Montgomery ..	0.29	0.86	..	..	..	0.63	1.60	..	1.32	..	..	0.51	5.21	1.15	0.63	2.92	0.51	5.21	15
16	Lehore ...	0.07	4.32	..	..	0.87	1.02	9.32	0.94	0.61	..	..	0.51	17.69	1.39	1.89	10.87	0.51	17.69	16
17	Amritsar ..	0.13	5.69	..	..	0.85	1.90	9.32	1.70	1.10	..	..	0.77	21.46	1.77	2.75	12.12	0.77	21.46	17
18	Gurdaspur ..	0.21	6.48	..	..	1.73	4.69	10.88	5.91	7.96	..	..	1.13	39.29	6.69	6.42	21.75	1.13	39.29	18
19	Sialkot ...	0.43	4.91	..	0.03	1.09	1.62	13.56	4.17	5.65	..	..	0.51	31.27	5.34	2.74	22.08	0.51	31.27	19
20	Gujrat ...	0.32	4.93	..	..	1.35	0.10	8.84	4.40	2.98	..	..	0.56	23.48	5.25	1.45	16.22	0.56	23.48	20
21	Gujranwala ..	..	3.95	..	..	1.61	1.00	9.68	2.47	2.83	..	..	0.50	22.04	3.95	2.61	14.98	0.50	22.04	21
22	Shahpur ..	0.65	2.10	..	..	2.15	2.00	5.95	0.15	1.25	..	..	..	14.25	3.75	4.15	7.35	..	14.25	22
23	Jhelum ...	1.62	3.84	0.20	..	1.16	0.23	9.15	7.34	3.85	..	..	0.22	27.61	5.66	1.39	20.31	0.22	27.61	23
24	Rawalpindi ..	1.40	3.04	0.57	..	1.13	0.30	8.41	4.30	8.87	..	..	0.87	28.89	5.01	1.43	21.58	0.87	28.89	24
25	Abbottabad ..	2.28	5.71	3.90	..	3.70	3.94	9.82	9.98	6.57	..	..	1.48	49.40	11.80	9.66	26.37	1.48	49.40	25
26	Peshawar ..	0.03	2.81	2.11	0.19	1.23	0.06	4.27	0.32	1.06	..	..	0.87	11.95	4.45	1.48	5.65	0.87	11.95	26
27	Kohat ...	0.10	3.15	1.56	..	2.04	0.43	2.28	2.85	1.27	..	..	0.61	14.29	4.81	2.47	6.40	0.61	14.29	27
28	Banna ...	0.04	2.40	1.17	0.11	0.79	0.07	6.73	..	0.33	..	..	0.07	11.71	3.61	0.97	7.06	0.07	11.71	28
29	Dera Ismail Khan ..	..	4.72	0.09	..	0.39	..	0.49	..	0.36	..	..	0.45	6.50	4.81	0.39	0.85	0.45	6.50	29
30	Dera Ghazi Khan ..	..	0.80	..	..	0.53	0.12	2.41	..	3.67	..	..	..	7.53	0.80	0.65	6.08	..	7.53	30
31	Muzaffargarh ..	0.07	1.35	..	..	..	..	2.13	..	1.05	..	..	..	4.60	1.42	..	3.18	..	4.60	31
	MEAN	0.39	3.77	0.33	0.11	1.03	2.19	8.17	4.39	2.67	0.01	0.04	1.06	24.14	4.48	3.33	15.22	1.11	24.14	

APPENDIX D.

LAWRENCE MILITARY ASYLUM AT SANDHAR.

No. 1.—Table showing the sickness and mortality among the children of the above Asylum during the year 1898.

MONTHS.	Average strength		Average number daily sick.		Number daily sick per cent. of strength.		Number of deaths.		Fet per 1,000 of strength.		CAUSE OF DEATH.	
											Respiratory disease.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
1	2	3	4	5	6	7	8	9	10	11	12	13
January	231	179	0 86	0 11	0 37	0 06	...	...	...	...	...	...
February	208	209	3 46	3 29	1 37	1 57	...	...	...	...	...	...
March	288	211	1 20	4 51	1 46	2 11	...	...	...	...	...	...
April	293	212	4 53	3 09	1 55	1 46	...	...	...	...	...	...
May	292	209	4 67	2 96	1 60	1 43	...	...	...	...	...	...
June	290	209	4 45	0 96	1 53	0 46	...	...	...	...	...	...
July	267	212	8 21	0 29	2 86	2 07	...	...	...	...	...	...
August	283	211	12 14	17 03	4 21	7 96	1	...	3 56	...	1	...
September	282	219	9 68	10 25	3 42	1 68	...	...	...	...	...	...
October	282	219	2 18	0 50	0 77	0 23	...	...	...	...	...	...
November	288	216	0 57	1 83	0 20	0 85	...	...	...	...	...	...
December	197	137	2 11	1 77	1 07	1 13	...	...	...	...	...	...
For the year ...	273 42	205 75	4 77	4 39	1 74	2 13	1	...	3 66	...	1	...

Distribution of Children according to age on 1st July 1898.

SEX.	2 and under 5 years.	5—10.	10—15	15—20	Total of all ages.
Boys	5	104	134	51	294
Girls	2	62	103	48	215
TOTAL	7	166	237	99	509

APPENDIX D—concluded.

No. II.—Table showing the causes of admissions into Hospital among the children of the Lawrence Military Asylum at Sanawar during the year 1892.

[illegible]

Admitted per Cent. of the average strength in each month.

APPENDIX E.

LAWRENCE MEMORIAL ASYLUM AT MURREE

No. I.—Table showing the sickness and mortality among the children of the above Asylum during the year 1898.

MONTHS.	Average strength.		Average number daily sick.		Number daily sick per cent. of strength.		Number of deaths.		Died per 1,000 of strength.		Cause of death.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
1	2	3	4	5	6	7	8	9	10	11	12	13
January	41.35	35.83	.	0.06	...	0.17	..	...	...	...	...	...
February	66.67	56.00	0.11	0.01	0.16	0.07	...	.	...	..	...	...
March	60.35	63.74	0.06	0.03	0.09	0.05	...	...	...	...	...	...
April	76.23	66.20	0.07	0.20	0.09	0.30	...	...	...	...	...	...
May	73.41	67.82	...	...	...	..	...	...	...	...	...	..
June	74.30	71.53	0.07	0.50	0.09	0.70	...	.	...	...	...	..
July	75.00	73.00	...	..	...	...	...	...	...	...	...	...
August	75.35	73.00	0.10	..	0.13	...	..	...	...	...	...	.
September	74.53	74.40	...	...	...	...	...	...	...	...	...	...
October	72.03	75.56	0.03	0.10	0.08	0.13	.	..	.	...	...	...
November	72.00	76.00	0.13	...	0.18	...	...	...	..	...	...	...
December	45.10	45.03	..	0.03	...	0.07	...	...	...	...	...	...
For the year	67.95	64.87	0.50	0.80	0.68	0.12	..	...	...	...	...	...

Distribution of children according to age on 1st July 1898.

Sex.					2 and 5 years.	5—10.	10—15	15—20.	Total of all ages.
Boys	28	34	15	75
Girls	28	33	12	73
Total	54	67	27	148

APPENDIX E—continued.

No. 11.—Table showing the causes of admissions into Hospital among the children of the Lawrence Memorial Asylum at Munroe during the year 1893.

CAUSES OF ADMISSIONS.	NUMBER IN EACH MONTH.																								TOTAL ADMISSIONS DURING THE YEAR.		ADMITTED PER CENT. OF STRENGTH.		DIED PER CENT. OF ADMISSIONS.	
	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.							
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.		
I	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		
Small-pox	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken-pox		
Measles		
Enteric fever		
Simple continued fever		
Intermittent and remittent fevers		
Malignant cholera		
Diphtheria		
Whooping cough		
Mumps		
Acute rheumatism		
Phthisis pulmonalis		
Menigitis		
Sunstroke		
Epilepsy		
Conjunctivitis		
Valvular disease of heart		
Croup		
Bronchitis		
Pneumonia		
Dysentery		
Diarrhoea		
Abscess and ulcer		
Tinea		
Itch		
Wounds		
All other causes		
Total	2	3	1	1	2	1	2	6	..	..	2	15	..	..	3	..	..	..	2	3	4	..	1	18	26	49	41	70

Admitted per cent. of average strength in each month.

APPENDIX F.

STATEMENT SHOWING THE RATES OF PRINCIPAL ARTICLES OF DIET, RAINFALL, AND DEATH-RATES BY QUARTERS DURING THE YEAR 1898.

Sl. No.	Districts.	Wheat.				Rice.				Grain.				Rainfall in inches.				Deaths-Rates per mille.			
		1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.
1	Hissar	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
2	Rohtak	11	12	13	14	10	10	10	12	12	20	21	21	150	4.16	4.80	1.01	24	26	28	32
3	Gurgaon	11	14	16	16	9	10	10	12	12	19	19	20	140	11.03	11.03	0.82	23	30	37	36
4	Delhi	12	15	16	16	8	7	8	8	13	19	19	20	211	8.33	8.33	0.56	29	40	47	40
5	Karnal	11	12	13	15	12	8	8	10	12	19	20	20	286	1.10	1.10	1.11	26	37	41	38
6	Unhala	11	14	14	14	12	11	11	10	11	11	20	22	591	1.13	1.13	2.18	30	42	49	41
7	Simla	11	15	17	17	11	12	7	12	10	21	21	22	917	1.12	1.12	1.39	25	35	39	35
8	Kangra	11	11	6	13	7	6	7	8	13	11	13	13	610	11.11	11.11	3.22	19	23	24	21
9	Hoshiarpur	14	15	16	16	11	11	11	14	11	13	17	20	1091	15.00	15.00	6.51	25	33	31	31
10	Jullandhar	13	16	18	18	9	9	10	10	13	20	25	25	5.92	2.21	2.21	4.39	23	27	29	29
11	Ludhiana	14	17	19	19	8	9	12	12	14	21	23	23	1.19	3.55	3.55	1.18	27	31	29	31
12	Ferozepore	13	17	19	19	10	10	10	11	16	16	20	20	1.11	2.25	2.25	1.81	28	33	31	36
13	Mooltan	12	16	17	17	7	7	8	9	13	19	22	23	1.21	3.11	3.11	0.52	25	30	26	35
14	Jhang	12	14	16	16	12	13	13	15	13	19	20	20	1.10	0.22	0.22	0.01	31	26	20	31
15	Montgomery	13	18	22	22	8	10	10	11	12	17	19	20	1.17	0.91	0.91	0.05	12	31	32	31
16	Lahore	13	15	17	17	10	12	13	13	16	19	22	22	1.15	0.63	0.63	0.51	24	31	17	21
17	Amritsar	13	16	18	18	9	10	10	11	13	19	22	23	1.39	1.89	1.89	0.51	25	30	32	32
18	Gurdaspur	13	16	19	19	8	9	10	10	13	20	23	22	5.82	2.75	2.75	0.77	25	33	35	42
19	Siakhor	12	14	17	18	7	8	9	12	11	12	16	16	6.63	6.12	6.12	1.13	23	29	35	44
20	Gujrat	12	13	16	16	8	10	11	12	11	13	16	16	5.31	2.74	2.74	0.51	23	30	36	44
21	Gujranwala	13	14	16	18	9	10	10	11	14	19	21	22	5.25	1.45	1.45	0.56	21	23	30	36
22	Shahpur	13	18	25	20	6	7	7	7	13	24	25	24	3.95	2.61	2.61	0.50	30	36	37	37
23	Jhelum	15	17	22	22	6	8	9	9	13	19	21	21	2.75	4.15	7.35	...	31	25	23	30
24	Rawalpindi	14	16	16	17	7	8	8	9	13	18	19	19	5.06	1.39	20.34	0.22	31	24	26	38
25	Hazara	13	15	18	18	9	9	9	10	13	15	16	15	5.01	1.43	21.68	0.57	33	24	26	11
26	Peshawar	13	17	17	17	8	9	9	11	12	16	17	18	11.89	9.66	26.37	1.18	21	18	20	24
27	Kolhat	12	12	15	15	9	9	9	9	13	13	16	28	4.81	2.17	6.40	0.61	41	21	22	58
28	Bannu	16	19	24	22	7	8	6	7	14	24	25	26	3.61	0.97	7.06	0.07	49	27	22	33
29	Dera Ismail Khan	14	17	18	18	6	6	7	7	15	21	21	23	4.81	0.39	0.85	0.45	57	38	23	23
30	Dera Ghazi Khan	14	16	17	17	10	12	16	14	12	16	18	19	0.89	0.65	6.08	...	33	31	20	25
31	Muzaffargarh	13	16	17	18	11	14	15	15	12	16	18	19	1.12	...	3.18	...	40	29	20	35
Average	Average	13	15	17	18	9	9	10	11	13	18	20	21	1.18	3.33	15.22	1.11	28	30	29	37
Average rainfall for previous 10 years.		...	...	...	...	...	...	...	...	...	4.23	...	...	4.63	...	17.75	1.16	...	...	...	...

APPENDIX G.

STATEMENT SHOWING THE NUMBER OF WELLS CLEANED AND THE NUMBER OF PARAPETS CONSTRUCTED DURING 1898.

No.	Names of Districts.	Number of wells cleaned.	Number of parapets constructed.	Amount spent.	Remarks.
1	2	3	4	5	6
				Rs.	
1	Hissár	22	6	...	
2	Rohtak	68	7	...	
3	Gurgaon	46	1	...	A contribution of Rs. 50 was made from District Funds towards the construction of a <i>pacca</i> well for the benefit of the public.
4	Delhi	11	6	176	A contribution of Rs. 39 was also paid from District Funds to a Brahman for constructing a well on a village road.
5	Karnal	2	...	...
6	Umballa	4	3	...	
7	Jullundur	31	14	...	
8	Ferozepore	42	14	...	
9	Mooltan	135	...	...
10	Jhang	638	...	...
11	Montgomery	13	...	...
12	Gurdáspur	47	25	587	Mr. J. M. Donie, Deputy Commissioner, says that this year the Public Works Department grant was usually low (Rs. 25,369), but next year we might be able to provide funds for protecting wells.
13	Siálkot	356	...	...	36 wells were repaired also.
14	Gujránwála	456	...	2,099	36 wells were repaired. The Deputy Commissioner says that no special provision is made for platforms or parapets, and charges on this account are met by transfer from other heads of the account.
15	Jhelum	3	...	...
16	Ráwalpindi ... ..	...	...	2,012	The District Board spent a total sum of Rs. 2,012 on improving wells and other sources of water supply in the district during the year under report.
17	Hazára ... ..	...	...	...	The Deputy Commissioner says that the wells in this district, which were used for drinking purposes, chiefly in the Haripur tahsil, were cleaned as usual by the villagers.
18	Pesháwar ... ..	...	...	434	The Deputy Commissioner says that the sum of Rs. 434 was defrayed from the District Fund for cleaning wells.
19	Kohát ... ..	...	...	1,744	Mr. L. White King, Deputy Commissioner, says that there are two underground <i>karez</i> s which pass through a part of the city, and the people use them for washing, bathing and occasionally for drinking purposes. The opening of these <i>karez</i> s were made <i>pacca</i> during the year at a cost of Rs. 1,292 so as to prevent the pollution of the water by filth and dirty rain-water to which they were previously exposed. These <i>karez</i> s were also cleaned out at a cost of Rs. 452 during the year.
20	Dera Ismail Khan ... ..	...	...	...	Mr. A. H. Grant, Deputy Commissioner, says that no funds were available this year, but the matter will be kept in view in 1899. Efforts are being made to have <i>pacca</i> platforms round the drinking wells.
21	Muzaffargarh	34	2	...	
	Total	1,908	78	7,052	

